Introduction to Chronic Lyme and Cellular Stress

where people get confused. Because Lyme disease, as far as a new infection with a new bacteria, is very different than chronic Lyme disease, where the bacteria have been in your body often for a very long time.

So that's where we can start talking about antibiotic and other kinds of things. And that microbe factor in general because because if your cells are stressed from bad diet, chronic exposure to toxic substances, not sleeping, not exercising, not getting good blood flow, they're vulnerable to microbes.

And that's what tips the balance to chronic illness. welcome to Vitality Made Simple. This is the podcast that equips you to feel better, look better, and to enjoy better relationship.

You know, life is all about relationships and you have more to give when you feel good. Let's enjoy today to welcome Doctor William Rawls. He is an M. D.

who earned his degree from the Bowman Gray School of Medicine at Wake Forest. Now, originally, he was trained as an ob gyn, and. But, you know, life has a funny way of changing things.

He's an avid outdoorsman, and because of his love of the outdoors, he contracted Lyme disease. And now he is one of the world experts in this area originally.

Welcome, doctor. Ralph, thank you so much for coming. Well, thank you very much. Yeah. It's, it's a pleasure to be here for sure. Well, originally, I, preordered your book called The Cellular Wellness Solution because, just have my interest in, you know, herbal medicine.

But as I got to know you through your book, in your compassionate way of writing, your concise way of writing, I learned that you had actually an earlier book that we're going to talk a little bit more about today, Unlocking Lyme disease.

And that was birthed out of your, your own journey. And, I've learned a lot from you because, you know, in my mind and we talked a little bit off recording.

It's a new disease, but it's not a new disease. So tell our listeners about your journey initially and how how you learned about this very, confusing ailment.

Yeah. I think you illustrated one of the huge misconceptions about chronic Lyme disease in that introduction. I didn't get Lyme disease when I got a tick bite.

I grew up in the woods. I've always been an outdoor person. I got tick bites all the time, but I never got sick. Never. I became an ObGyn because, you know, it's bringing life into the world.

It's a lot of fun. It's a healthy group of patients. But 30 or 40 years ago that came with a very rigorous call schedule. So I had, I had responsibilities for labor and delivery in the emergency room for 24 hour shifts, including working in the office every second to third day, every second to third weekend, from Friday morning until Monday.

And so I basically existed in a state of being chronically sleep deprived, most of the time when I was on call, I was lucky if I got four hours of sleep and in my 30s I could sleep hard when I wasn't on call, catch up and, you know, and I would be fine.

But as I get into my 40s, it became more difficult. I was having difficulty sleeping when I wasn't on call. And then by my late 40s, my body started breaking down and I had all this range of symptoms, went for testing with my

conventional colleagues and the medical world, and they couldn't really find a whole lot.

Doctor Rawlsu2019 Lyme Journey and Recovery

And the testing was variable, and sometimes my thyroid would be off, sometimes not. So, you know, and so testing is very specific in chronic illness. It's everything breaking down.

So the testing really isn't that great. And we rely on the testing. But a lot of times it leads us astray. And the bottom line is I wasn't sick enough to get a diagnosis of much of anything, and I didn't really recognize Lyme disease as the problem.

Eventually, you know, I kept coming back to that have been bitten by ticks. It's got to be something in my body. There's got to be something that's driving this.

And, I finally found, you know, that I got a positive test for Borrelli, and it's like, oh, yeah, this is this is the this is the track, you know, now I can take antibiotics, get well, go on with my life.

Made me sicker and started better. And my body kept breaking down my you know, I have heart issues. I ended up with a cardiac cath because my heart was skipping beats every second to third beat.

I had brain issues or neurological symptoms I thought I might have missed. Not quite sick enough testing. Well, it really didn't reach those parameters.

And I just kept going around in circles and finally found an herbal protocol for Lyme disease. Embraced it because I was pretty desperate and I didn't want to.

I couldn't really afford or didn't and didn't have the luxury of being able to take off. And do you know, six months of the antibiotics, which had some big question marks about, herbal therapy got me.

Well, and it took a while, you know, it, took 3 to 5 years to completely get my health back. But, I did, and I've kept it and I've continued on the herbs and I've had some of the most robust health in my entire life over the past ten years.

So I've been well for a long time. And that had led led me on a completely different journey. I stopped practicing ObGyn. I focus more on this concept of wellness and incorporated herbs and natural therapies.

I became really more like a natural path and, start making people well, and it felt really good. But it's it was so different than the mainstream, you know, it, it really challenges a lot of things.

And that journey has put me in a very, very different place of how I look at chronic illness in its entirety. Well, Doctor Ross, I, I make fun of normal a lot on this podcast because in our society, people just get used to being sick and they don't even notice things.

So tell our listeners about some of the ambiguous symptoms they might be having. And they maybe are ignoring initially. Yeah. Well, I think it's important to ask what's a symptom.

Right. So what what what is a symptom? It's hard to describe. Right. And people think, well, it's this feeling I get. I don't feel well, it could be. It could be pain.

It could be, you know, just, a, you know, so not sleeping well, having burning in your feet, having skipped heartbeats. So there are a lot of different kinds of symptoms.

And so symptom represents dysfunction in the body, right. So when we talk about symptoms I'd like to take it down to an even deeper level. So your body has made entirely of cells right.

Everything in your body I mean, you know, we're basically a collection of several trillion cells held together loosely by connective tissue, collagen and other molecules that hold the cells together.

But we're all cells, so it doesn't matter what's happening in your body. Cells are doing it, you know, cells or cells make your heart beat cells. Make your brain impulses for our cells produce collagen, or produce thyroid hormone that, helps the metabolic functions of all your cells, cells stitch us back together when we, you know, have an injury of some kind.

So everything that happens is done by cells and all of our cells are networked together. So hormones and other signaling agents and nerves are, coordinating all of those cellular functions.

And our brain is sensing what's going on inside and outside the body and using nerves and hormones to change cellular functions, to modify what's going on.

So we adapt to those conditions. And that's true of every living organism on Earth. Plants, animals, everything are responding to that same, kind of thing.

So when you look at a symptom, a symptom is specifically cellular dysfunction because of the body's native cells. So when I was having irregular heartbeat, it showed that my heart cells were stressed.

So no matter what your symptom is specifically pointing to the types of cells that are being injured or or stressed in some way. So two things happen when your cells are stressed or injured one, they produce substances that activate nerves, that send a message to to our brain to tell our brain something's wrong.

So we feel it is pain or discomfort. So discomfort is, is is is a component of a lot of symptoms. But symptoms are also a sign of cellular dysfunction.

The cell is stressed or injured or damaged. So it can't do its job. It's not working. So those cells are collectively not meeting expectations. And so when you look at more generalized symptoms like fatigue, you're talking about cells throughout the body that are being stressed.

So it's not surprising that you have you have chronic illness. Then cells in the body are stressed throughout the body. And so so fatigue is one of those key symptoms of virtually every chronic illness.

So that's how I see illness. All aspects of all illnesses are rooted and cellular stress that one thing. So we have different illnesses because different cells in the body can be stressed in different ways.

But that's the root of it. Cellular stress is the root of all illnesses, all chronic illnesses. Whether you're talking about chronic Lyme, multiple sclerosis, dementia, it's all cellular stress.

So it's it's really important that we get to the root of that cellular stress. So your overwork basically being so stressed as a physician, was wearing down your terrain, your cellular resistance and, that made you susceptible.

Correct? I mean, is that that's basically. Yeah. Yeah. And then so so that really challenges, doctor all the, the testing. I mean, it's so difficult to diagnose Lyme disease.

Tell our listeners about what you've learned in terms of, the tests that diagnose acute versus chronic and why people are getting a lot of false negatives, So testing works best when something is well defined.

So you've got a, blockage of a, artery in your heart. You know, that's well defined. You break your leg, you want to know exactly where the leg is broken and which leg is broken.

Symptoms, Diagnosis, and Cellular Dysfunction

You have an acute bacterial pneumonia. You know, you want to know the bacteria that's just invaded your body

and is wreaking havoc in your lungs. Testing is really good for those focus things.

Things that you need immediate intervention. It's really good. But when you get past ruling out all the things that need immediate attention, the things that aren't going to get better unless you do something about them pretty immediately, then testing is used to define the diagnosis, and that's where it starts getting messy.

Because when you look at that concept of cellular health of all illnesses being a function of cellular dysfunction, what we're doing to define chronic illnesses is we're measuring the dysfunction, not looking for the causes of the dysfunction.

And it's like M. S., you know, there's not one test for M. S. it's this wide spectrum of criteria that involves a lot of different kinds of testing and and interpretation of an individual.

So that can vary. So it's not surprising that some people might have all the symptoms but not get the diagnosis. And I found this to be in my, true in my office as I move more toward helping people with chronic illness.

You know, I had all these people out there that were waiting for a diagnosis or didn't have a diagnosis, and and they're waiting on therapy because this diagnosis defined the therapy. But when, you know, went.

So I would take them in my office and say, okay, you're waiting for that diagnosis. Listen, let me see if I can work with you. And our goal is to see if we can get you well before you even get the diagnosis.

Because when you start looking at the root causes of chronic illness, there are a lot of similarities and things kind of run together. So getting to the root causes I think is very valuable.

And that's what's missing in our whole system for chronic illness. We're treating the causes. We're treating the dysfunction. And by the way, you know, inflammation.

That's a process. That's part of the dysfunction. If you're treating the inflammation you're not treating the causes of the inflammation. People don't get well.

So it's not surprising that 60% of our population are walking around in a compromised way, that they have to be on medications just to manage their illness well.

And and that's why it's so, exciting and unique about your approach. Because even in the functional medicine world, we look at inflammation as the cause.

We don't look that far below that. And of course, we're we're just so used to having, you know, pin the tail in the diagnosis, you know, in somebody getting a diagnosis and then getting a prescription or even a supplement for this specific diagnosis. And, it makes me remember when I first heard about Lyme disease, it was all about antibiotics.

I mean, it was about these layered antibiotic regimens that just went on for months. So I want you to define for our listeners how that actually makes things worse in the long run for the root cause.

Yeah. Yeah. Well, yeah. Well, when we come back to that and let's, let's, get let's dive into those root causes a little bit because we're going to come back to the microbes.

I think that's going to be really, really key. And it's so when you ask that question, what causes it? What are the root causes of illness? You know, where I was 20 years ago was realizing that there are a lot of common root causes.

What somebody eat, you know, that that is, well, well-defined root causes, processed food, high meat, inflammatory diets, those things that increase risk of illness.

And then we have toxic substances in the environment that we're exposed to so much in our modern world. Well, there's a lot of evidence that that increases risk of a lot of diseases not getting sleep.

That was an obvious one for me. And, not getting exercise. But then there's that microbe factor. How does that fit in? So we'll come back to that. But it really boils down to this.

So we've been talking about cells. So when you think about a cell it is an isolated functional unit. You can think of your cells as little biological microscopic machines that do work.

So all of our cells come from one cells. You know, we start off as one cell in that cell because of that genetic program inside differentiates into all of our other cells, but all of our cells, even though they've been modified for specific functions, basically have the same internal parts.

So when you look at them as little microscopic machines, all machines have operating requirements. So your cells, every one of your cells has five specific operating requirements.

The function. And so every cell in your body has to have the right nutrients. So if you're eating a whole food diet, which is a whole cell diet, you're getting all the cells in your body, the right nutrients so they can function properly, the right amount of carbohydrate and fat burn energy.

And certain cells, you know, they need other specific things, like our thyroid cells need iodine. But if you're eating a whole food diet, you've got all your cells in your body covered.

Two cells need a clean operating environment. So what toxic substances do is disrupt the machinery of ourselves so they don't work right. So all the things that we're exposed to from industry and coming out of the back of automobile, tailpipes and all the other things and end up in our food and our water and our hair inhibit cellular functions.

That's how they harm us. Cells need downtime to recover. Cells need a good eight hours of rest. So our cells work all day and they are constantly having to rebuild and repair.

So they need downtime during the day, but especially that eight hours of sleep at night. Now some cells in our bodies, like our heart cells, have to rest in between beat.

That's why our heart is so vulnerable. Our heart never stopped, but most of our cells need downtime. So if you're getting an average of 6.5 hours, which is normal for Americans, you start every day with a deficit that your cells haven't recovered from the day before.

And that's what that was the big thing that happened to me. So stress pushing, that stress button, driving through modern life keeps us from sleeping.

It keeps our body and high alert. It keeps our cells from recovering. Our cells need good blood flow. So when we look at physical activity, then being physically active moves blood.

And that flushes away debris and congestion. So when we talk about inflammation what inflammation is is increased die off of cells. So when cells are stressed throughout the body or stressed in a location like you have an injury, you have an increased diet of stress cells from stress cells that have been stressed or injured.

So that that if it's happening faster than the immune system can clear it. That created debris and congestion in our our tissues. That's what inflammation is.

So inflammation is part of the process of cellular stress. So you need good blood flow to flush that stuff away to clear all that congestion. So that's for the last one is microbes.

Microbes are our cells arch enemy. But there's a lot of difference between an infection and microbes that are already in your body. And that's where people get confused.

Because Lyme disease, as far as a new infection with a new bacteria, is very different than chronic Lyme disease,

where the bacteria have been in your body often for a very long time.

So that's where we can start talking about antibiotic and other kinds of things. And that microbe factor in general because because if your cells are stressed from bad diet, chronic exposure to toxic substances, not sleeping, not exercising, not getting good blood flow, they're vulnerable to microbes.

And that's what tips the balance to chronic illness. Yes. And, you know, we talk a lot on vitality made simple about these opportunistic microbes. They're there.

But, you know, all the things you mentioned, and I might add to that, Doctor Rawles, even things like anger and unforgiveness, that raise cortisol are going to affect that.

Underlying base. So, these opportunistic bugs, they're silent if everything's healthy and well-rested and, well nourished and, kind of like, Antoine Beauchamp, one of my favorite dead guys, talked about the terrain theory of of illness.

Back in the 1850s. We don't have to worry so much about the germ if we keep the terrain healthy. That's right. So? So antibiotic acts, of course, are going to kill off, a lot of the good things they're going to they're going to result in those opportunistic things, potentially overgrowing.

So as you went through your journey, you you started looking for other options. You were like these antibiotics, I'm not getting well, I'm maybe getting sicker.

So so that made you explore, herbal medicine. Yeah. So, so tell us, you know about the epiphanies. I think that you read the difference between the two.

Yeah, yeah. In the beginning, it was just desperation. And I thought, yeah, if these herbs really work, they're going to mess up my gut, just like the antibiotics did.

And they did. And that's when I learned some things that were really signif. And and since then, I've been able to find the science that actually proves these things.

Root Causes of Chronic Illness

Antibiotics were and back in the 1940s when penicillin came along, it was just extraordinary because finally we had a tool and and tools like antibiotics and vaccines changed everything because a lot of people died of acute infections and a lot of people died of trauma, that they got infections that could not be healed.

And so, so they died. So antibiotics are single chemical agents. And by the way, all counter biotics originated from nature. Either a bacteria, plant or a fungus.

Every single one of them, where, you know, you once had this idea that antibiotics came from a lab. This smart guy scientist would be, would develop this chemical that would inhibit bacteria and or viruses or whatever in a certain way.

And, yeah, we're just smart. We pull these things from nature. So penicillin was a single chemical pulled from a fungus. So it was. So the fungus was producing a lot of chemical substances.

Super. Do protect itself from bacteria. Bacteria. Fungus is arch enemy. And we just pulled one of those chemicals because we're not good enough to reproduce that whole system.

And we want a pattern that things that we can make money on it. So most antibiotics, all antibiotics are derived originally from natural source. And then we modify that chemical to either potentiate it or change it so we can get a patent on it, because you can't patent natural things.

Antibiotics are exceptionally good for fast growing bacteria. That's really important. That's very, very key. So if you've got something that's invading your body acutely, an acute pneumococcal pneumonia, that bacteria is turning over very, very rapidly.

And so a pneumococcal bacteria will double itself, double its growth and 20 minutes. And that means somebody get really fast really. So really quickly and antibiotics can knock that out because antibiotics depend on fast growing bacteria.

So when you take an antibiotic you're hitting those fast growing bacteria a lot harder than you're hitting your normal flora. So you can get away with it for about ten days before you start generating antibiotic resistant bugs, and before you start really disrupting your gut flora so fast growing bacteria, it works.

Borrelia, the Lyme bacteria, has a doubling time of about 12 to 24 hours, not 20 minutes. And that's in in its active state. So antibiotics aren't going to work as well for those kinds of things.

And there are a lot of those kinds of things. In fact, we're exposed to those kinds of things more than were exposed anything else throughout our lifetime.

We're constantly exposed to tick bites and bug bites and flea bites and dog scratches in hamster bites and, you know, and it just goes on and on. Plus, we pick up things from putting stuff in our mouth.

And so we're exposed to a lot of different things throughout our lifetime. And I once thought as a physician that, you know, you're exposed to these things, you develop immunity to them, your immune system gets rid of them, and they're cleared and you're okay.

You won't hear from them again. And what my research has revealed, just looking at all of the world's research on this particular topic is that's not not the case.

In most cases. When we pick up the things, what happens often is these things become dormant inside of our cells. And when you look at the Lyme bacteria, Borrelia, or what we call the co-infections Bartonella is but is Rickettsia zana, plasma, so on and on and on.

You find that these things can invade the body, often very quietly, without anybody having symptoms. Dig into tissues, invade cells and become dormant, and they can stay dormant for a very long time.

So microbe dormancy is well documented is a key survival mechanism for all microbes. At any given point in time, 60% of the microbes on Earth are in a dormant state.

So it's a survival mechanism. They can hang out, they can wait, and they're actually much more, if more successful than that pneumococcal bacteria that's trying to invade your body and kill you.

Because if it kills you, then its host is gone. They don't want to kill the host, they want the host healthy so they can get out and spread more of those microbes.

We're a platform for spreading microbes, and they know that. So when you look at the list of things, it's not a dozen microbes. It's hundreds and probably even thousands.

And beyond the things that were exposed to from outside our body, you know, well, well know things from your guns, things from your gut, things from your skin can enter your bloodstream and end up all in different kinds of places.

You know, there were, series of studies that serendipitously found that we've had it appears we have a microbiome of the brain, hundreds of species of bacteria in our brain, where they come from, the gums, the gut and the skin, mostly not from outside the body.

So these things are hanging out. So we're like an ecosystem. So we're learning about this now, but what we don't know is some of those microbes may actually be important.

They may be favorable for cellular functions, but most of them a lot of them are opportunist and they hang out there. But you go 20 years without getting sleep and not eating a good diet.

And all of these things that I did to stress my body and just the aging process that affects your cells. Eventually they started reactivating and they started breaking down my tissues to form a food supply to grow more microbes.

And that's what chronic blindness. But it's also what chronic get. A lot of chronic illnesses are EMS. A lot of people test positive for Borrelia, but also chlamydia and Epstein-Barr and other microbes do.

And you know, when we're when you really dig deep, you can find microbe connections to virtually all illnesses, including most cancers. And it's, so it's really interesting, but it's not these high grade pathogens that make you sick.

It's these low grade things that can just hang around and wait for that opportunity. And then when you do all these things and you get it, then you're in trouble.

That's a great description, Doctor Ralls, because, my area of interest is use a bacterium nucleate. And and it's a commensal bacteria, folks, which means that at low levels, it's actually a beneficial, it's just when it over grows that it, is sort of a biofilm accelerator and makes a lot of these other bad bacteria worse.

I see it very consistently. Doctor Ralls in, in patients who, have Lyme, say, a physician who's treating a patient for Lyme or mold, comes in. So far, 100% have had higher than optimal levels of use a bacterium nucleotide in their mouth and often it has translocated to their gut where it's, you know, made a home there, at higher levels.

Yeah. So, so just like you said now, is is this all, are these bacteria associated with Lyme? Are they all biofilm formers or and or hiding in the cell?

Why Antibiotics Fall Short in Chronic Lyme

Well, you know, you hear a lot about biofilms. And certainly in your world, biofilms that we call plaque are a big deal. And all bacteria can form biofilms.

But as you also know, how a biofilm does damage and causes symptoms is by damaging the surface that it forms on. But the bacteria within it aren't necessarily directly affecting other cellular functions.

They're kind of walled off. So I think biofilms are an issue, but I really feel like, you know, when you start seeing someone that's really getting bogged down with biofilms by then, their health is deteriorated a lot and that, you know, and their immune system, the best defense against, biofilms is a healthy immune system and healthy cells in the body.

So biofilms are forming kind of when illness is more advanced, when cellular health is really deteriorated a lot. So I think the, the nature of these bacteria, that makes them very antibiotic resistant and very resistant to treatment in general is the fact that you have this reservoir of them within cells in the body that are gradually and constantly reactivating, and that really starts to explain the symptoms of most chronic illnesses better, because if you look at that idea of your body being peppered, your brain, your muscles, your joints everywhere in your body, all of your tissues being peppered with with microbes that are living inside cells and hear not 1 or 2 or a dozen, but probably hundreds, maybe even thousands of different types of microbes present very low concentrations.

Not all of our cells have them, but when cellular health deteriorates, they start reactivating and they start damaging cells directly. Well, not only on top of that.

You know, if you can imagine microbes emerging from cells, well, the immune system at that point sees that and

starts attacking the cells, which really antagonizes the whole situation.

But that would start to explain that autoimmune phenomenon that is part of so many chronic illnesses. So the symptoms are where the cells are being damaged, where the cells are are damaged the very most.

And so then you start looking at, all right, if different chronic illnesses or different cells being affected. What we also know is that different microbes invade different cells in the body.

You know, Borrelia has a preference for certain kinds of cells, and rickettsia has preference for certain kinds of cells. And so when you start having reactivation and disease in those particular cells, that causes a particular symptom.

But if it's going on throughout the body, you know, just fatigue and malaise is really, part of it too. So when you look at that model of cellular health and, you know, dormant microbes being reactivated throughout the body, it really very, very eloquently explains why certain symptoms occur and what's going on with chronic illness.

And then when it starts to get advanced, you know, the bacteria start form Vo films whenever they have an opportunity, because that DNA is just another defense mechanism.

So so we treat these things with, you know, anti-inflammatories or whatever. So we're not getting to the root cause at all very different than herbal medicine. So.

So tell us, Doctor Rawls, as you started to make these discoveries, you were feeling worse. What herbs did you start with? Yeah, well, there was a regimen of herbs defined by an herbalist named Stephen Bruner, who had looked at herbs for their antimicrobial properties and herbs that had positionally traditionally been used for things that we now know were infections.

But specifically and, you know, he was looking for things that were used for infections that we now know were associated with spirit. Keates, those that corkscrew bacteria that not not necessarily Lyme disease, but bacteria like that.

So he chose some of those things and people started using it and they started getting better. But it also didn't disrupt the gut. So fast forward a bit, just by research over the past 20 years, I've really come to think of herbs very differently than I did in the beginning.

In the beginning, I was pretty naive and it was just like, oh, something's maybe this will help me. Let's see. But then, as I got interested in it, as I started getting better, I studied traditional herbalism, traditional Chinese medicine, Ayurvedic medicine, you know, the various herbal disciplines.

And I found that there were where you went on Earth. There was a lot of similarities. But it was mainly observational. Here. You use this herbs when you have this particular symptom.

But I was more interested in what the Arabs were actually doing at a biochemical level at a cellular level. So I started digging into the science. And that's what's been so interesting in the past 20 years, is we now know, pretty well how herbs work.

And it really boils down to this. When you look at a plan, a plant is a living organism like us. It's a multicellular organism, and it deals with most of the same threats that we face.

So plants have to, you know, their cells are being threatened by free radicals, toxic substances, radiation, but microbes of every variety. So everything living is food for something else.

So we plants funguses for food for bacteria. And so plants have to defend their cells from viruses, from other fungi, from from virus, from bacteria, from protozoa.

So plants are have a built out defense system that, unlike our system, is cellular. We have immune cells. Plants use a chemical system. Also fungi use a chemical system, and bacteria have to defend themselves from other bacteria.

So they're using the chemicals. But it's a system. Yeah. So, you remember I said, you know, we pluck one chemical from a system to make an antibiotic?

We're not getting the whole system. Well, not having that system is is a big loss. So when we take an herb, we're taking the plant's entire defense system.

Hundreds and hundreds of chemicals that we call phytochemicals that are designed, they're there to protect the plant's cells from free radicals, from toxic substances, from things like too much carbohydrate isolate.

You know, phytochemicals protect us from that. But all these different kinds of microbes. But but when you look at a plant, you're talking about a system.

So it's not a single random chemical that doesn't have intelligence. So the plant system has a certain intelligence that is specific for pathogens but doesn't affect normal flora, which is really key.

And why taking herbs. For years I took high levels of herbs for for five years, and I've been taking herbs for 20 years because it doesn't disrupt normal flora in the gut, on the skin, in the mouth you can take them.

In fact, herbs have the opposite, when compared to probiotics or much of anything else, I've found that herbs do a better job of balancing our entire our internal microbiome than anything else.

My mouth health is better than it's been. I've always had good teeth, but now my mouth health. I mean, they tell me at the dentist, man, I don't have to clean very much, do you?

Just your dental grade. And, I wish I could say it's because I always brush and always floss. Yeah, I'm pretty good at it, but still, you know, it's been better since my, since I've been doing the urge.

My gut health is better. My skin is just robustly healthy. So the herbs are doing things. They're basically. It's a self-protection system. And it's not just protecting our heart cells or our brain cells or our liver cells.

It's protecting every cell in the body. So you get this robust system that you can use to constantly add suppression. So when these microbes reactivate, there's something they're suppressing them constantly.

And and that I think is is a big key. So it's not only valuable for chronic Lyme disease, it's valuable for everything. So you're talking about something that has a very low potential for harm, a very high potential for benefit.

I mean, I haven't I haven't, yeah. Every one of the drugs that I've studied had anti-cancer properties. Who doesn't want that? Now, here, you know, I've been talking about herbs in a very general sense.

When you look at herbs, there is a spectrum that goes all the way from food plants that we eat and culinary herbs to herbs that do have to drug like properties that you wouldn't want to use.

So all plants aren't safe for us to eat.

Microbes, Dormancy, and Biofilms

Nobody would make the mistake of trying to use poison ivy as a medicinal, right? So, but there are a lot of plants that humans have been using for thousands and thousands of years that we define as herbal medicine that are very safe for us to use and have really extraordinary benefits that we all should be paying attention to.

I totally agree, and I think it's a fascinating area to start learning about. Doctor Rawls. That's why your book is

informative, because there's, it's super important to make sure you're getting quality herbs, because there's the active portion.

There's probably I mean, I'm talking as not knowing much here, but, it's how they extract the active portion now. I mean, you could be spending a lot of money.

I would think, on something that really, was mistreated and isn't effective. So how did people, find something that they can trust? I know you, I you're, you've got a robust website of information for our listeners, at Rawls, M. D., which we'll talk about later.

But, generally, what do people look for in terms of certifications? Yeah, it's, Yeah, I think it is. You know, looking around and finding reputable companies that are doing the right thing.

And it's probably about half and half. You know, there are a lot of companies out there spending, a whole lot more on marketing hype, than they are the actual product, the actual herb.

And the key to that is if you go to a website and it just has all this marketing hype and it sounds so unbelievably convincing, but you're having a really hard time finding the actual ingredients of the product.

That's a huge red flag run away. And I would say that's probably half of products out there. So being able to define what's in the product is really important.

So what you're getting when, you know, if you go to a health food store, if you get on the internet and you found an herbal product for sale, mostly what's available is what's called powdered herb.

Just a powdered whole herb. And basically what they do is they take the plant, the herb, they dry it and they crush it into a powder, and they put it in a capsule.

So mostly what you're getting is inert fiber. There's not very much photochemistry there. If you're paying 15 bucks for something, you're not going to get much.

So kind of the step up from that is and what most herbalists used are what are called, herbal extracts or tinctures. And what they're doing with a tincture is they take the plant, the, the active parts of the plant, whether that's the roots or leaves or whatever.

And they put that in water and alcohol. So the water and alcohol each extract a different spectrum of the chemicals from the plant, because you want to get that whole plant, it presents as much as you can.

And the and then they discard the plant part. So all you've got is the chemicals in the water and alcohol. For people who don't like alcohol, you can do glisser.

Right. Extracts, but they're not as potent. They don't work quite as well. So those are pretty darn good. So it's hard to go wrong with a tincture. But what we use in our products and what I focus on with my recovery was standardized powdered extracts.

So what they're doing there is they're taking that water alcohol tincture, spraying it on a surface, drying off the water and alcohol and collecting the powder so it's pure photochemistry of the plant.

So what you're getting there is ten times more potent than that whole herb extract. And if you look at the capsules, it looks like they look the same.

They're both just capsules of powder, but one is ten plus times more potent than the other. And so better companies are you going to use standardized extract.

So if you go in there and you find that they actually do put the ingredients where you can see them, you'll see if it

says just list the name of the Erb, especially if it's just the common herb.

And they give the milligram gram quantity. That's a whole herb powder. Go the other way. You're not getting much except for, with rare exceptions, or even worse, a proprietary blend that they're telling you.

Oh, it's 1500 milligrams of all of these different herbs, but it doesn't give you any more information than that. They're going to put the least potent, cheapest herb in there.

And that's what it mostly is. So run away from most proprietor dairy blends. So what you want to find is that they've listed the common name, the scientific name, and they've put the milligram quantity of that or but it'll also say standardized to some one of the phytochemicals.

So it's a standardization. So that's going to be a more constant rated product. That's going to be better. Now as far as is it. Is it the right herb. Is it free of chemical contaminants.

Biological contaminants that sort of thing. That's testing. And so reputable companies, do the added, step of doing testing or requiring testing. So all of the extracts that we buy, we get a certificate of analysis.

There's a third party testing. But even that, I mean, companies, you know, you don't have to just go with what they the, you know, whoever's selling that extract got, you know, doing business with the same people who trace it out to the farm.

So you've got some good information on where it came from and what, you know, how it was, how it was made is important. But we take the extra step of testing, taking a sample of that lot and testing it again to make sure that's certificate of analysis is real.

And then most good manufacturer manufacturing companies now do testing during the manufacturing process to make sure everything is blended. Right. That all adds cost.

So you're going to pay a lot more for a really high quality product, but it's worth it. You know, you're going to get the benefits that you're looking for.

Oh yes. People waste way too much money on supplements. I think, just kind of that false hope of if I take something, then, I'm going to get better, you know, that desperation.

So. So, Doctor Rawls, you, as an outdoorsman, I would think you had some fear about getting back outside when you were feeling better. How did you overcome that?

And what do you do to protect yourself now? You know, there is that always that fear in the back of your head. But I realized that, you know, people are going to get tick bites.

We get chigger bites, tick bites, mite bite mites live on our skin. We have things in those things carrying inside our carry. Microbes. The fewer you get, the fewer opportunities microbes have to enter your body, the better.

And, so I think you you do have to be careful. So when I'm out, I mean, I do a lot of hiking and a lot of places I tend to go places that are a little bit drier and freer of ticks.

But, you know, I've done a lot of hiking in Maine and New Hampshire, too. And, I used to do the full clothing thing that, you know, you're you're clothed from head to toe and, and, now in the summertime, you know, I wear shorts and I just a mental thing.

I'm vigilant, you know, I if something hits my leg, I immediately look down, and I typically find ticks, whenever they get to me, I don't go through brush.

I'm very careful about, only going on open trails. But even then, sometimes trails that have a lot of leaf litter, litter,

you can still pick up a tick.

So it's it's valuable. I don't use Deet or any heavy chemicals. I typically use, use, essential oil sprays. I've found that they are quite effective. You know what the plan is using essential oils for the difference in an urban essential oil is the essential oil is basically an insecticide that the plant is producing, and it keeps it in a little vacuoles and it's in its leaves.

So essential oils are great insecticides and insect repellents. And they don't have the toxicity of all of the artificial petroleum derived chemicals that we use.

Herbal Medicine and Immune Modulation

So and then I take a shower, you know, after I've gone for a long hike somewhere, I do a good tick check when I get back and I, go take a really good shower.

Where you live is important. And interestingly, I live on the coast of North Carolina, and certain places have ticks. Certain places don't. On our Outer Banks along North Carolina, they're deer on all the different islands, a lot of ticks.

They're just ticks everywhere. And you have to really be careful about going back in the maritime forest. I live just slightly inland. I live on a marsh, and they're hiking trails, you know, that?

Go along the marsh here in Wilmington, North Carolina. And I've never seen tick here. It's the craziest thing. I don't know. You know, we have a lot of raptors, hawks and owls and I'm wondering if they're eating the mice and keeping the my mouse populations down.

But can we hike? I go for a walk in the woods every single day. And I haven't had a tick year yet. Knock on wood. Wow. That's amazing. Years ago, probably 20 years ago, I was planting some, black bamboo and, that our zoo, our Oklahoma City Zoo was getting rid of.

Well, I picked up Rocky Mountain spotted fever. Yeah. And, you know, I guess that's really probably dormant, right? According to everything you've said, it probably could be reactivated.

It did you get Rocky Mountain spotted fever? Well, they tested for it. I had a really good internal medicine physician who put me on Doxy Cycling. I sort of thought, I'm glad you covered the ambiguous symptoms, because I was probably, you know, 45 or 46 at the time, and, like, 20 years ago, and, I thought, well, I'm in perimenopause, you know, I just ignored it.

And, you know, very high energy person didn't really stop for anything. One day, doctor, I woke up. It's like I'm going to die today. Something. Something is so wrong.

I've got to get help. And had our doctor cell number, and he called in taxi cycling. So you know, from everything I know I had it, and it was kind of a long, recovery, a long stint of Doxy Cycling.

I didn't know anything about, you know, root cause health. Still probably quite bulletproof at that age. You know, you were in your 40s when this happened.

You just kind of think. And I'll rest a day and I'll be fine. But all that to say, we are in a very tick infested country. We were a big boy scatters in so have used a lot of Deet.

Can you expound on specific, you know, essential oils that you like for repellents? You know, really, any of them. And there are a lot of combinations. Yup.

Eucalyptus is a good one. You know, tea tree oil is very nice. So here we're looking at herbs that you can put on your skin that don't irritate your skin.

And, there are a number of different products, a product made here in North Carolina that, I've known about and carry a bottle is Murphy's Naturals. They make a really nice combination.

So, but any of your essential oils are going to have insect repellent properties, and that's just the nature of the essential oils compared to the herbs.

But not only that, if you're taking herbs, you're continually providing yourself with extra coverage against these things. So you mentioned Rocky Mountain Spotted Fever, and I think that's an interesting one just to compare to Lyme disease.

And here we're talking about two different kinds of bacteria that have been, you know, associated with the acute infection. So Lyme disease is Borrelia.

And Rocky Mountain spotted fever is rickettsia. And but it's interesting that some of the original cases, both cases in Lyme, Connecticut, there was actually associations between the Rickettsia species that live there too.

So even the pure form of Lyme disease was it may not have been completely Lyme disease, but the deal with the rickettsia, again is the type of cells it invades.

So when you look at Lyme disease, Borrelia specifically, and many of the other microbes, bacteria that come in ticks, then we just random cells through the body, in Lyme disease, bacteria, Borrelia likes collagen, so it invades, you know, nerve tissue and various kinds of tissue.

And that's not necessarily going to cause acute symptoms. Rickettsia specifically invade the cells that line our small blood vessels, our small arteries and our organs and our peripheral tissues.

Right. So because of that, the cousin invades those cells. If you get any kind of infection, it blocks blood flow and it kills tissue. So even though rickettsia may not be any more aggressive than Borrelia because it's hitting a particular type of cell that makes us more vulnerable, it can be catastrophic.

And quite frankly, you know, when we look at acute tick bites and someone who is symptomatic that rickettsia, because of that particular, threat, that's probably the biggest reason why everybody ought to get take antibiotics if they become symptomatic after a tick bite.

Herbs are great too, and I always recommend do both, but, for acute things, for fast growing things, for things that are really that, that well-defined thing that can cause you harm.

That's what an antibiotics for. And that's where testing can sometimes be valuable. So yes, but very interestingly, I talk to people all the time that test positive for that rickettsia, Rickettsia, Rickettsia and but they didn't have Rocky Mountain spotted fever.

So it can get in your body and not call it symptoms and just go dormant. But again, it's that cell type. It's because it affects small blood vessels and can cause blockage that it causes those acute symptoms.

But another just really interesting tidbit on Rickettsia. So we have mitochondria that power our cells right. And there's good evidence that those mitochondria were ancient bacteria that were high energy bacteria that our cells picked up and basically just started outsourcing energy.

It was an ancient Rickettsia species that was, a distant, distant ancestor of the Rickettsia that causes Rocky Mount spotted fever, which is a pretty good indication of how long our relationship with intracellular bacteria has been going on.

Wow. Tell us more as I was reading your info. Tell us more about Japanese skullcap. Oh, that Chinese skullcap and Japanese not head to the Prof. Doctor Rawls is why it was sort of that quick U-turn there.

But tell us about that. Chinese skullcap is just a really nice herb. You know, the varieties, different varieties of of skullcap all around the world.

The American skullcap isn't quite as good an antimicrobial, but it's really good for calming stress. But, Chinese skullcap. Is this really nice? Of the immune modulator.

It calms and balances immune system functions. Calms, you know, allergic reactions. But it's a great anti-microbial against a very wide range of microbes.

Mycoplasma viruses. Borrelia. So it's really nice. And then Japanese knotweed is another one that we commonly use. Great source of resveratrol that you find in one that age defying substance.

Choosing Quality Herbal Supplements

Well, Japanese knotweed is actually a better source. But again, that's not the only phytochemical. It has this wide range of immune modulating and anti-microbial substances within the plant too.

So lots of different herbs. I mean, we could go on all day. There's and or grasses and cats galore and they all have wonderful properties. One thing I do, though is with these kinds of herbs.

I'm looking for things that are immune modulating. They balance immune system functions, not stimulate. So when you look at things for acute viral infections, echinacea, elderberry, those kinds of things stimulate the immune system.

So they're not things that you would want to use long term. So the difference, is you know, the things that we're using, I'm looking for herbs that don't have drug like effects, don't stimulate the immune system that someone could take for months or even years.

So, yeah, there are certain guidelines that we use for things that we would pick for someone using long term, and then other herbs that maybe we wouldn't want to do that.

Yeah. You you have a very elegant, Instagram. I would invite our listeners to, follow you for just tidbits of, you know, these clues on how to feel better.

Very naturally. I, I really, appreciate the the point of the whole plant. You know, it's it's never one thing. You know, we so often. Doctor rules want everything to be one thing.

When when diet, one exercise, when you know whatever. And it's not. It's the whole, whole whole terrain. Just as a side note, do you ever use Nigella sativa black seed oil for anything?

Yeah, yeah. It's, now there when you talk about black cumin seed oil. Here we're talking about the, the, the pulling in some of the essential oil components of the plant and with, with the essential oil, you have to be more careful about how you use it.

So the difference in an essential oil and an herb is the herb is chemicals that the plant is using to protect cells or coordinate cellular functions. So plants are using a lot of the same chemical messengers that that our cells are using.

So you're also getting that regulatory component from an herb. But it's all about protecting cells. So when you look at essential oils the purpose is different.

It's basically an insecticide. So the plant is is taking those chemicals that we call turbines and putting them inside a vacuole or a little bubble inside the leaves of the stems.

And it's isolated from the cells because it's potentially toxic to cells. So when an insect comes along and starts

chomping on the, the leaf or the stem of the planet releases these noxious substances and chases the insect away, well, we're a lot bigger than an insect.

And they also those substances do have anti-inflammatory and anti-microbial properties, too, because they have some cell protective effects. So when you look at an essential oil, you've got something that is valuable, but there is a higher level of toxicity there also.

And, so you have to respect that. So I do use essential oils. There's some that are well tolerated. On your skin you can use tea tree oil. And, and but internally the few that you can use safely are oregano oil, black cumin seed oil which has carboxyl in it, one of the chemical components there's the anti-microbial, neem oil you can use internally and you get them in little soft gels.

But you have to be careful, you know, these things that I typically don't recommend that people use more than a few weeks because it will start irritating the gut.

And, so but, the three black cumin seed is my favorite. It's a, it's a really nice, nice essential oil. And you are getting some of the herbal components in that preparation.

So it's not just purely an essential oil, but but yes, it really has some nice applications. One of the active ingredients is from a quinone in, like seed oil, Nigella sativa.

It it's it's effective. It has a lot of research, on the bacterium nuclear bottom. And so I've done some very informal little studies here and there, you know, measuring, doing a, a DNA analysis of, of the oral microbiome, seeing where things get and, and from everything I can tell, it does not disrupt the good bacteria, the, you know, nitric oxide producing bacteria, but does lower these a bacterium nucleate.

Tick Prevention and Outdoor Safety

And so that's that's why I brought it up. It's just one that I typically I encourage my patients to use and give them a bottle actually to, to get them started.

Yeah. Yeah. It's, it's a, it's a really nice thing to have in your toolbox. You know, and it's not covering that one bacteria. I always tell people that, you know, it's, it's affecting all potential pathogens and not at the expense of your normal flora.

So, you know, you get this really nice effect, and there's just no antibiotic that can do that, you know, I mean, I, I tell people all the time that just be careful with antibiotics because there is a place for them.

I mean, the world would be at a loss without them. But we've used overused them so much and we haven't made any new antibiotics since the 80s. It cost a couple billion dollars to bring a new drug to market, and the pharmaceutical companies are interested in things that people take for a lifetime that don't make them, well, not things that might cure them for something.

So they haven't made new antibiotics. There's bacterial resistance to all antibiotics. And, the more you use them, the more you do it. Grow path of antibiotic resistant pathogens in your body and contribute to that bigger problem.

So when you look at chronic Lyme disease, it's a huge problem. And people do die of it because, you know, of other complications of it because it just is basically contributing to bad health.

Antibiotic resistant pathogens kill a million people every year. And that's been growing. It's have been happening every year since the 80s and 90s, and it grows every year.

It's an enormous problem. And so for acute infection, save your antibiotics for when you get something acute that you really need it. And be careful with them.

Well, you've given a lot of hope for Lyme sufferers because, so many times they come in and they're like, well, I'm a Lyme patient, you know, that becomes their identity, doctor.

And and I tell them that's not their identity. So, so I appreciate, you know, the, the comprehensive work you've done. It makes me picture the garden, sort of like you plant your garden and there's this, you know, little area that doesn't get good water.

Or maybe it's in the shade. And that's where all the bugs go, right? You know, that's that's where you find all the squash bugs or whatever the, the plant that's not robust and not getting the nutrients it needs.

So that's sort of how we are, in terms of susceptibility. So, so folks, I can really see why for talking to you, I can see why you wrote Cellular Wellness after writing your book on Lyme disease.

I mean, it's just a more general thing. So this is not just about Lyme disease. This, as doctor all said, is about M. S., this is about fibromyalgia. This is about memory loss, brain fog.

This is about insomnia. This is probably about infertility. This is about autoimmunity. This is about type two diabetes. So many of these things help regulate blood sugar.

So, so thank you. You're really, you're improving relationships. You really I you. Yeah. I always challenge people. Don't be your diagnosis. Move beyond your symptoms and beyond your diagnosis, and focus on the things that are making you sick.

And the bacteria are part of that. But that's not the whole thing. You've got to take care of your whole body, your whole terrain. You have to have a true holistic approach and get well and move beyond it and go do great things with your life.

You know, I make people stand in front of the mirror and say, I am not my diagnosis. I'm a child of the living God. My body is designed to heal.

Resources, Hope, and Closing Thoughts

I just have to give my body what it needs to help it get well. I mean, I make I make people say these affirmations because I think that's really part of healing.

Just the power of the the power of the spoken word. So, so thank you. Thank you. Tell our listeners about the the richness on your website, about vital plan and what they can, harness from your, experiences.

Well, well, thank you. Probably the best connection is roles in md.com/resources. And that'll give them a lot of information. With my daughter, I co-founded a supplement company.

Really? Because, in my practice, I wanted my patients to have IRBs, and I couldn't find any good products. And we eventually started having products made, and we've been building on that for a decade.

And so we've created a company that's not just, producer of supplements, you know, we, we just I've designed programs and, we have a community and just it's it's, it's all about that holistic approach to getting well, to moving beyond your diagnosis to getting your life back.

And, so, you know, we're we're really passionate about it. You are, you are, you're you're changing the world. So I will put all of this in the show notes, Doctor Rawls.

And, I can't thank you enough for your time. You're someone I, admired from a distance, via Instagram. And I thank you for your content there. Oh, well, yeah. Thank you for the opportunity.

Yeah, it's it's, changing the world. Yeah. It's really important and super fun. And thank you, listeners. You're the

reason this podcast is growing. We're now in 137 countries and almost 50, 500 cities.

And that's because, you all are smart about, social media. Smarter than me. But I am now on Instagram. So join me on Instagram and join me on, YouTube and join Doctor Rawls and just go out there, live your passion, fulfill your purpose.

Blessings. Until next time.