Introduction and Doctor Lewisu2019s Background

Welcome back to the Reverse Alzheimer's Summit. I'm so thrilled to have Doctor Lewis here today. He's a medical scientist with advanced degrees from MIT and the Harvard School of Public Health.

He has developed novel algorithms to predict and measure chronic diseases with emphasis on neurodegenerative diseases. He uses a combination of risk assessments, biomarkers and pathology testing, mainly using the eye as a canary in the coal mine to health to determine where you lie on the health disease continuum.

His team of doctors and coaches run a virtual practice that reverses even the most severe diseases. A key area of Doctor Lewis's work is in chronic infection and its relevance to Zs and its treatment.

Alzheimer's disease, for example, is often caused or exacerbated by chronic infection like periodontal pathogens or chlamydia pneumonia. If you're not testing, you're guessing.

Doctor Thomas Lewis, welcome to the show. Thank you so much, Heather. Pleasure to be here. I am so thrilled to get into this with you, because I have a patient who's been seeing you and is getting really great results.

So I am, That is why I've invited you, is because I think everyone should know about the role of infections, and also some very cutting edge testing so that we can understand these a little bit better and also go ahead and treat it and get those results that we're looking for that we so desperately need.

So how did you become interested in dementia and Alzheimer's? What's your personal story? That's a great question. I was interested in Alzheimer's about 30 years ago, and then coincidentally, my dad came down with it shortly thereafter.

He was doing some very bizarre things you wouldn't have wouldn't have expected him to do, but we realized he had something going on in his brain. He actually died of disease 19 years ago.

But 18 years ago, I met, a gentleman at Harvard and ophthalmologist of all things who really, really illuminated what goes on in Alzheimer's to me because he was reversing this disease in people and I mean reversing it 20, 30 years ago and very profoundly.

But he added to it very quietly because, his wife Zena would tell me, you know, Clem is 40 years ahead of his time. Unfortunately, I think he's even more ahead of his time than that.

So, when I when I saw what he could do, it was life changing for me. And I knew I had to take on that mission because he was just working as a humble clinician of ophthalmology at Harvard.

And I knew it had to go beyond that. Wow. And so the eye tell me a little bit more about how the eye is directly related to Alzheimer's. And neurodegeneration.

Well, you know, I have a couple props for you. And, you know, I think the key one was by a chaired professor at Harvard. And if you know, you know, he is an assistant professor, associate, a full professor and a chair professor of the fancy one.

So this is John Darling, and he wrote this book called the. It's really a textbook, the retina, the approach to the part of the brain. But really the the retina is an outcropping of the brain.

It is part of the brain. And so very often what's going on in your eye for tens or is exactly the same as what's going on in your brain and what you can see when you look at good study.

Something like glaucoma, which some researchers call glaucoma, is Alzheimer's of the eye and Alzheimer's is glaucoma. The brain that the exact same pathology and physiological under antecedents that lead to this disease.

But see glaucoma will show up 10 to 20 years earlier. And that was my dad's case. He had glaucoma first before we even had any clue or even the mildest cognitive impairment.

And the beautiful thing about the eye is that, you know, you don't have to cut a hole in your skull to see what's going on. The the instrumentation that optometrists and ophthalmologist have to analyze.

Disease is so superior to whatever anybody else is doing. I'll give you a simple example. Oct optical coherence tomography. Tomography is the key word.

It's, an instrument that makes three dimensional imaging sort of like an ultrasound or an MRI. But Oct has much better resolution than MRI. So when a neurologist looks at the brain with MRI and they say, yeah, a little loss and mass, but we really can't see anything, probably not much going on.

The Eye as a Window Into Brain Health

Oct can measure thickness and volume of your retinal ganglion cells, which again are a surrogate for your brain down to the microns. And we can we can see the changes very accurately with this technique.

And it's noninvasive and it's low. It's, you know, very low cost I mean pennies compared to to an MRI. And so could a patient who's curious or wondering, maybe even someone who's pre-symptomatic doesn't have symptoms of dementia yet, but curious if there are changes in their brain happening.

Can they just go in to an ophthalmologist and get this test? So I actually recommended optometrists, and I have a network of optometrists that they don't work with for me, but there's groups that do higher level training in optometry.

And the reason rise theory towards optometry rather than ophthalmology. Ophthalmologists are actually even though they're MDS, they're actually following the surgery.

So they tend to want to do aggressive treatments. And I don't want them to do that. I want to just do an analysis. So I'm probably one of the I might be the only person in the world that's regularly doing, I evaluations.

I have a very simple thing. You you order an IV. I had a brain test with me, and I give you a link to a couple of the optometry associations. I send you there with a form, and I do the following.

Do not tell your optometrist you're going to get evaluated for Alzheimer's. All I want them to do is do a complete eye exam. Looking at very well known, disease states and pathologies.

Cataracts. You know, cataract is the number one surgery in the world. A certain type of cataract portends Alzheimer's. And that's not me. That's Rudy.

Doctor Rudy Tanzi, chair professor of neurology at Harvard who's higher than him, wrote a paper in 2003. How super nuclear or cortical cataracts are the exact same pathology as the 142 beta amyloid plaque in the brain of Alzheimer's patients.

Now, optometrists and even ophthalmologist general generally ignore cortical cataracts because they don't affect central vision, so they're just observed in the standard of care.

And the next test is macular degeneration, a very common test fundus camera looking for something that, Don Anderson out of UC Santa Barbara has been studying most of his life, called Drew's it, Drew's it.

A little yellow globules that show right up in a fundus camera view. And these little yellow globules contain the

same path, same protein. They call it a misfolded protein, but that's a misnomer.

It's actually all these amyloid are actually part of your innate immune system that's trying to protect you against something underlying that's causing deterioration, mainly to your vascular, the vasculature.

It's, you know, a little known is that you have to have a capillary within three cell diameters of any living cell. So think about a little teeny vessel and it starts getting disease.

And now you're four cell diameters away from that capillary. Well that retinal ganglion cell for cells away is struggling if not dying. So you know macular degeneration is a vascular disease but it will affect the nervous tissue.

And then the last one is really just looking for a glaucoma screening. They'll do pressure. And that's mainly what ophthalmology and optometry does. It's a disease of pressure quote unquote.

It really isn't. It's a disease of inflammation. Pressure goes up with inflammation. But really what we see in this tomography system similar MRI but much more precise is we can measure the thickness and volume of the retinal ganglion cell tissue, called your retinal nerve fiber layer, with great great precision.

And the beautiful thing about that test, if I take a 20 year old and an 80 year old, the test is normalized to your age. So you're really seeing how you compare to your your age cohorts.

And I think we're we should have published a paper a while ago, but I'm not really a researcher. I'm more a translator right now. I like working with people, but we show that we can actually restore nervous tissue, okay?

We can rebuild that tissue. And it's not a guess. Oct is so precise, we can measure it accurately. Imagine if you had, you know, a set of calipers and you could see this tissue.

It's here now it's here. And and this is the kind of thing that's really, profound in terms of neurodegeneration. Can you rebuild tissue? And that is, that's the, that's the challenge we all face.

And it's really I look at it as a three legged stool to accomplish that. Yeah. So go into that. What is that three legged stool. Stool. How do we, rebuilding there degenerated to degenerated tissue.

And, do you see clinical results? So do people's symptoms track the changes that you're measuring? Oh, yeah. We we, you know, because it's easy to do.

We run the, the mini mental task to do very simple task. The regression score of 30. One of my most recent patients we retested, very recently went from a 17 to a 25, and his retina was showing a 2% increase in thickness.

As he's aging normally, you'd expect a 2% decline. So that's that's really critical. So you know, we can we can definitely see these things. I know the Berettas and protocol using CNS vital signs and much more accurate characterization of brain and brain function, cognitive function, motor function from the brain, all that stuff.

But at the end of the day, what what myself and my my partner in crime, in this, functional doctor, doctor Michael Carter and I do is we look at disease, particularly chronic diseases, you know, in, in the health care system is the, the codebook for the doctors.

Right? It's the ICD 1060 9000 diagnostic codes for diseases in our world. There are four mechanisms. So okay. And they apply equally as well to diabetes, cataracts, Alzheimer's, autism.

It doesn't matter. And the first one is poor repair and recovery. If you're eating if you're not eating well or more importantly, if you're not digesting well because you are what you absorb, not what you eat, that's the first.

That's the first, place to start. I was in line this morning in a store, and there was a gentleman in front of me, and I was crying. It was real thin.

And I just made conversation, because he had a really dark tan. He said, well, my skin is like onion paper, and if I press on it, I bruise easily. He doesn't.

Testing, Risk Scores, and Chronic Infection

It's not the bruising. It's the fact that over time is repair and recovery pathways are in the toilet. So yeah, you know, his all his tissue is on the edge of of giving it and the brain and the eye are really good.

It's a really good place to study because your brain is ten times more metabolic than any other tissue. Doctor Sarnoff talks about this, but it's well published.

You know, 25% of the oxygenated blood that leaves your heart is going to your brain. Your brain is only 2.5% the mass of your body. So it's ten times it's using ten times more oxygen.

That means it's working ten times harder. Now, if you did this with a weight all day long and work that bicep all day long, that bicep would get tired.

Your brain's the same thing now. The only thing that's more metabolically active than your brain. Guess what is your on the I is teeny. But in terms of vessel density, there's nothing denser.

So if you're repair and recovery pathways or are not good these highly metabolic tissues retina, eye, brain are going to suffer. So that's the first place to start.

And that's easy. The next thing is food sensitivities or sensitivities in general. The third is, you know, are you always in a fight or flight mode if you're out, if cortisol is always up, you're always stressed, you're not sleeping well, guess what?

It's going to affect your repair and recovery pathways. And you sleep for your brain in your eyes. Once again, your biceps not tired, most people's biceps not tired, but your brain and your eyes never shut off.

Okay, so you've got to rest for them. And then the fourth thing is what I call chronic toxicity. But chronic infection is the biggest part of that because you can you can identify you've been exposed to lead or something like that, and you can detoxify and you can kill out the lead.

But when an infection takes hold, two important things. It can replicate and grow inside you without further exposure. And and secondly, it it can wind up in tissue, in very localized tissue rather than being systemic.

So it can be in the campus, it can be in the retina, it can be in the joint for arthritis. So this is where the science and art of diagnostic comes in.

Because you look at all the blood you have in your body, yet you only have this small piece of tissue that's infected that your immune system is chasing down.

And so your labs may not go up, but by a pittance. Yet you have a very severe, infectious, insidious infectious process going on in a very small amount of tissue that can have a profound effect on your health, eyesight, cognitive function, things of that nature.

So this is this is where testing really becomes, well, I like to think we've made it very scientific. Do I dare go into that now? Well, I, I it sounds like it.

So see what you mean by that. What do you mean by. You'd like to think you made it very scientific. So if you look at lab tests online and you and you see what the, the normal reference ranges or reference intervals you'll get from lab core and question ranges like this.

And they're really looking for acute disease. Are you sick. Do you need to see a doctor or a specialist. Right now.

So it's unscientific. And I was just in Doctor Trump's office.

This had to be 15 years ago. And he goes, Tom, the only thing that really matters is mortality and more specifically early mortality. Okay. And there's a lot of misinformation about longevity.

You know, National Geographic did a great study in 2013. The title of the article is called 100 candles. People would do 100. And what they showed is if you lived to 100, you have nine years of declining health and everything is an asymptote.

It's like this. So you actually the nine years, you know, a lot of those years are still pretty good. If you lived to 80, you have 19 years of declining health.

So what we did is that, okay, mortality or early mortality is an endpoint published in many medical scientific papers. So what we did is we looked at things like C-reactive protein, white blood cell count, neutrophils, a lymphocyte ratio, fibrinogen, erythrocyte sedimentation rate and looked at where it's good.

Studies could show that these markers showed the first increase in mortality. And the simplest one is, white blood cell counts. A white blood cell count is so inexpensive.

Now, this is a Harvard study. Just to give you an example, Harvard study. They oversaw the Women's Health Initiative, 138,000 women that they studied prospectively.

What that means is they measured these women very accurately in many, many, many centers and then follow them and see what happened to them. And, you know, they measured who died and whatnot, their ages and all that.

But what they showed when they started extracting the data is if you have two groups of women, one with a white blood cell count of 4700 and another group with 6700.

Now keep in mind the reference interval for white blood cells or like 3500 to 10,800. So we're talking two sets of women very very much. Normally the doctor would look at them, say labs are fine, so they follow them for six years.

And the women at 6700 died at twice the rate as women at 47. So why wouldn't you tell someone at 6700 that you have greater risk? Why wait till 10,800?

So we built an entire scale on this early mortality. And since every marker we use to trace the exact same endpoint, early mortality, we amalgamate this and we use 21 markers.

It's applicable to Alzheimer's or arthritis or whatever. But it's all inflammatory immune health markers, clotting markers, things like that that all you know, we're all connected.

And so we create a risk score. We call your chronic disease temperature based on these 21 markers. So we're able to really tell if someone's getting better by not looking at a plethora of individual labs.

We can look at a single score to tell whether someone's heading in the right direction, physiologically or not. And then, of course, we do dive down into each marker and help them understand what the risk factors for each marker is.

But you know how the you know, how do I know you? Very little right now. We just met. But there's a story behind you and we say this the same thing about your labs.

It's not all your your A1. See, is this and then your lipids of this, know what we try to do is we try to build a story around all the labs to help you really understand, understand your health.

Now, how infection comes into this is that the difference between someone with a 4700 and a 6700, which in the

standard of care is no difference, is almost always some type of chronic infectious process.

And how we glean what it is, is with another test that comes out of a complete blood count with differential. Once again, one of the most expensive, inexpensive tests you can order.

And it's a neutrophil to lymphocyte ratio. So neutrophil is a type of white blood cell usually goes up with bacteria. And a lymphocyte is a type of white blood cell.

It either goes up or down with viruses. And so when the neutrophil the lymphocyte ratio goes up, we can kind of tell what kind of pathogen may be affecting that individual.

And then of course we test for them and have treatment protocols for a specific pathogen. But it's not it's not a whole lot unlike Lyme. You know, Kris Kristofferson was diagnosed with Alzheimer's like eight years ago.

And headlines Kris Kristofferson has Alzheimer's. And like two years later, he came out. No, no, these are the headlines. And, you know, popular media.

No, he doesn't have Alzheimer's. He has Lyme disease. What's the difference? The pathology is unmistakably Alzheimer's. But they actually found the cause in this case really a burden off her eye infection or maybe co-infections that go along with Lyme disease.

So this is kind of although it sounds like you're saying the, you know, the eyes are the window to disease. And so if you can find these markers in the eye, a very simply, relatively affordably, you can also find markers in a CVC or a complete blood count.

That's again very affordable, very simple. So we find these markers for disease. Then what. How do we know? You know, when you look at we we believe and don't believe everybody lies on a health disease continuum.

And that's your overall continuum. But there are a continuum of underneath that. So the eye helps us understand where you stand on the pathology continuum.

That's closest is the disease because it's actual tissue changes. Then backing up a little bit earlier in life, you have a physiological continuum. That's our chronic disease temporal temperature.

But at the end of the day it's all about risk factors. One of those risk factors, you know, do you have Gerd. Do you have a thyroid issue. You have energy issues.

Do you have poor sleep? This is where you really get into coming up with some basic protocols. But I will tell you, when someone has a subacute or chronic infection, then we have to get much more aggressive at treatment supplements, lifestyle changes, intermittent fasting helps and repair and recovery.

But we even go so far as going into pharmaceutical treatments. What we do, what we generally do with an individual, let's say we have an Alzheimer's sufferer.

What we will generally do is do a complete workup, very detailed risk assessment. We digitized our risk assessment and give a score, very detailed physiological assessment.

The eye test to corroborate this. There's some neurodegeneration process going on. And then we're going to really dive into dive into those risk factors and start ameliorating the low hanging fruit, the simple risk factors.

So what we're going to do is we're going to do at least six months of pretreatment. Let be coaching, nutritional guidance, supplementation, things of that nature, working on improving their physiological score.

Then if we've done the testing already or if we decide to do the infectious testing, then it's when we're going to we're going to pull out the guns to do some more, aggressive treatments.

Unfortunately, a lot of the functional treatments aren't that effective. And it's very, very explainable. There's a, MD researcher out of Vanderbilt, Charles Stratton, who's written some papers and patents that explains that these organisms that are stealth and chronic, not like you have staff for the flu, you know, you feel sick.

They're insidious, that they can live in three different forms, a couple of which are completely hidden from the immune system. And they're quasi dormant, you know, like everybody knows, chickenpox.

You can get shingles later in life. That is not the only organism that can go stealth and come back to play opportunistically. Let's see. The problem is.

And what what doctor E well, I'll pull up another profile, but anybody who's really interested in this topic can read this book. Plague Time. It's all about really the modern germ theory is that the biggest problem with with subacute or chronic infections is what's called practicing.

And what that means is, you know, someone had Covid, you were with them, you get Covid, you know, you got it, you got Covid. But with chronic diseases and chronic infections that often caused this, you have no clue as to when you might have been exposed and you might have been exposed pre-birth might be a congenital infection.

A lot of times that happens, you know, chickenpox, that's a congenital infection. There are many other congenital infections. Myself, I had a-fib I titrated it back.

The Lyme disease. I was bitten by ticks many, many times.

Inflammation, Brain Injury, and Neurogenesis

I had a perfect storm of, health issues in my 40s, you know, stress and over exercising and then getting sick. I had this perfect storm and Lyme disease came back out to play.

And it almost always affects the vessels. We say it's arthritis, but it's really the vessels in the joint. We say it's all assignments, but it's really the vessels in the brain.

We say it's glaucoma or macular disease, but it's really the micro vessels, the capillaries in that tissue that's causing this disease. And these infectious species are like vampires of your blood.

Yeah. This is a great theme. You know making sure there's enough circulation. For anyone who's listening that's really curious about circulation and making sure you're getting enough oxygen, nutrients, delivery of everything that's necessary for a cell to, to function not just optimally but to function at all.

Doctor Mark sweat or Mark Squibb? His conversation with me is it goes into a lot of detail about that. But I want to, come back to what you mentioned about the white blood cell count.

So this is a very common marker. And I imagine many of our listeners are going to go back to their labs and say, what was my white blood cell count? Am I going to die soon?

And if as from a clinical perspective, what I see a lot of are low white blood cell counts and those I have come to think of as a marker for a chronic infection.

So can you help me kind of square that circle? Because you're telling me that it is a high white blood cell count? No, it can be low or. No. If you, you know, for Covid, mass general, the Chinese, a lot of others have caught on to this and looking for, lymphocyte apnea.

So low lymphocyte counts. And if your neutrophils are normal because you don't have a bacterial thing going on and everything's copacetic there, then when your lymphocytes are lowered by the virus, then your white blood cell tone will come, comes down.

There's no question about it. And I think the IFM and others are very good with anti-viral protocols with quercetin, zinc, vitamin D, you know, the usual, nac the usual suspects, high dose vitamin C, Doctor Levy, all those things.

And ivermectin is now shown to be extraordinarily anti-viral. At first it was thought to be just an anti-parasitic. But, you know, frontline critical care doctors, are leveraging that information that was published really?

I'm not sure how far it goes back, but the papers I were, I was reading when Covid came out on ivermectin like 20 years ago, was showing its broad spectrum antiviral properties.

So, yeah. So if you're below our range, you know, the standard of care 30 510,800 or 900 and they change. They usually get broader. Not now or unless they want to, you know, prescribe you a drug.

Then they'll narrow that range. You can prescribe it more. But really your optimal range for a white blood cell count is 4000 to 5800. Okay. But then then you got to look at the ratios.

Because if lymphocytes go down and neutrophils go up, your total white blood cell count still looks normal. But you lymphocytes alone okay. That's why I use the neutrophil to lymphocyte ratio.

So when a white blood cell count is normal. But I know there's something going on because the person tells me this. They have arthritis, they have brain fog, they have whatever.

Then I look at the neutrophil to lymphocyte ratio and then look at the individual like if your neutrophil percent is above 58%, something's going on. If you're a lymphocytes or below a thousand, something's going on.

And it's not and it's usually, you know, a low grade. But the thing is either I do this for my participants. This is the standard of care. I take this pen and I stab the back of my hand and it's bloody bruised and it's nasty.

That's like my labs are way out, okay. But in chronic disease, all I'm doing is just rubbing Jack. So how does this look in two months? It looks here.

If I'm rubbing 24 seven for two months, this is going to be raw, bloody, and I'm probably to the bone. This is what chronic disease is all about. But see, the pressure I put on is sort of a reflection of how high the labs.

I don't have to go very high. To keep building. Like I'm not putting more pressure on at the end of two months. Matter of fact, I'm putting less pressure on.

Yet it's still a nasty wound. So in kind of bringing this back to dementia, I appreciate that analogy, because I think that really well illustrates the difference between chronic versus acute disease and conventional medicine.

And really, our society is set up as a whole to think about acute disease really pretty well. You know, I think they do a good job, but when it comes to chronic infections, we only have soaring rates of incidence.

And in so many people suffering without a ton of hope. So I'm excited to, you know, have you continue sharing with our, our listeners what kinds of things they can be looking at.

So what states of health and particular pathogens, make people most vulnerable to early Alzheimer's? Well, you know, I think, Doctor Trump and I wrote, my mentor wrote a paper that was published in frontiers, Neuroscience Aging called It's never Too Early and it's never too late to end the epidemic of Alzheimer's.

Starting at pre-birth, too, you know, when you actually have a disease progression is an early warning sign for Alzheimer's. People think that, you know, Alzheimer's patients get depressed.

Actually, that's really not the case. It's that they had depression first and then they migrate into Alzheimer's. Any inflammatory markers a risk factor for future Alzheimer's.

So, you know, you got to be really you got to look at the brain as not being separate from the rest of the body. And then any ill health that you have, if it stays consistent, even low grade will, can eventually manifest in the brain because the brain is so, you know, it's so vascular, so it's it's breaking down and building up all the time.

Let me just go over the three legs of the stool. So the first one is repair and recovery. We talked about that a little bit. Nutrients and good absorption.

The second one is really the inflammation which inflammation is a treasure. If you have inflammation something's causing it okay. And that's where we get to look at the chronic infection.

And you know, the work of Tanzi saying that, you know, these cortical cataracts which are the Alzheimer's cataracts, that protein that is the cataract is actually an anti-microbial peptide.

He published that information in PLoS in 2010. So the amyloid, which has been the target of the pharmaceutical industry in Alzheimer's for 30 years, is actually trying to protect you.

It's part of your innate immune response. But the brain is a little bit different than other parts of the body in this respect. And I'm a hockey player, so I follow hockey players that had concussions and and some of them, they get concussed and they can't get back into the game.

And so what I like to say is like you slam into the boards with your elbow and your head and about the same force, well, your elbow is probably okay to go in and in, in a couple of weeks or a month.

But sometimes your brain's not good to go for a year. And and the issue is this brilliant paper by two Australians published in 2017. I'll read the title just for he has.

But, it's called the, the meteorology of cytokine storms and the clinical usefulness of this knowledge. And then the key part of this paper that really helps understand it is how persistent cytokine storm, which is inflammatory markers, elevated white blood cells and, well, the neutrophil to lymphocyte ratio, elevated uric acid suppressed, white blood cell count.

To your point as well. C-reactive protein, homocysteine, fibrinogen. Usual suspects but persistent cytokine storms in the IL brain. So there's something special.

Like someone gets traumatic brain injury and there are vegetable. But if they if they bang their hip, their hips going to recover, there's something unique about it.

And I was just on a call with an MD one hour ago. We were just musing over this because she's worried about her mother and all this sweet stuff. And I think that we're just set up.

We're more vulnerable today for brain inflammation because we are eating an inflammatory diet. Most of our population, the omega six, the bad fats, too many cars.

We're afraid of fish because of mercury. But I'm convinced that the omega threes and other and fish and other anti-inflammatory foods that you have to have present all the time.

So when an event like a traumatic brain event occurs or something like Alzheimer's, you're there to quell the inflammatory storm in your brain. And then the other paper, I'm just looking off to my other screen, but it's really important.

We wrote Doctor Trump and I wrote this in our Alzheimer's book at the title of a paper by two Stanford researchers. Three of them, pardon me. Inflammatory blockade restores adult hippocampal neurogenesis.

So what I did in the paper and the book really is broke that paper down and put it into Layperson's language. And I'll, I'll just break the title down an inflammatory blockade.

In other words, just stopping inflammation that could be stopping the infection. Anti-inflammatory diet, you know, things of that nature restores adult adult hippocampal brain neuro neuron genesis Genesis the genesis of new not your brain is like humans.

We don't send babies to war. Babies are stem cells. Your brain doesn't activate stem cell activity when your brain is under an inflammatory assault. So the only pathway you have is the generation.

Treatment Strategy and Why Alzheimeru2019s Trials Fail

So, you know, good nutrition, identifying and stopping the source infection, for example. But then you've got it down. Regulate inflammation. You know, it's just like in Covid they say the cytokine storm kills you.

It's a combination. You know it's it's a chicken and the egg. But let's say the infection's gone. And if the cytokines are up to a certain level, you've gone over the hump and there's no there's no going back.

And in the brain it's the same thing. But it's not so dramatic as it is in, say, something like Covid 19, right. So this is a very hopeful message. I'm curious if because there's a greater understanding and also it's very consistent, you know, with what we hear from Doctor Peterson that it's a multifactorial, multifocal, landscape of I'm starting to think of it as the dementia verse.

Right. This universe of dementia. And, and there's, a problem scape or there's a landscape where by which someone can come to dementia and come to have dementia.

And how we unravel that is not going to be a one size fits all. Here's a drug, whether it's an idea pill or what have you, it's not going to look like that.

It's going to look like assessing in a much more holistic view what all is going on, and then plugging the holes. Or, you know, there's lots of different analogies that are used for this, but basically making sure that all of the things that are influencing poor health are addressed, even if we've come to think of them as being pretty removed from dementia, things like dental work or like you've mentioned, eHealth, joint health, all of these things are clues that there might be something out of balance that's contributing to that dementia.

So I'm curious what in in your, from your perspective, what the treatments look like for Alzheimer's? I think I'm sort of alluding to what I'm hoping you'll say.

And then why why so many have failed. You know why they've failed. If you look at pharma because they've gone after the wrong target and you know, the next big thing five or 5 or 8 years ago was the, hyper phosphorylated phosphorylation of type.

And, but we wrote in our book in 2011, those are going to fail. And they did, because, you know, it. Alzheimer's is really a hypoxic state. Lack of oxygen state, as you alluded to, Heather, in tissue in this case, in the brain.

And it's interesting that animals that hibernate hyper phosphorylated their tau. And when they come out of hibernation, they the hyper phosphorylated.

So hyper phosphorylated tau is obviously some sort of a hypoxic protective mechanism. That's why those have failed the amyloid anti-microbial peptide, as elucidated by Harvard.

So there's an infectious process going on. That's why those fail. Now, I don't claim to say that treating an Alzheimer's sufferer is an easy task when they're already in a state of cognitive impairment.

Because, you know, if you go to mass General and get an MRI with mild cognitive impairment, you already have 17% brain shrinkage. So the process is already ongoing.

So, you know, what what we do is, is, you know, doctor Brunson's wife's a functional doctor. Really. The his book is

all about functional medicine. Extraordinarily important.

Start with a mouth. I think it's overlooked. Oral DNA test. We do that cone beam looking for cavitation where you've had wisdom teeth looking for pockets.

Root canals have got to go. You know, I know it's an emotional and structural issue, but the oral DNA test or other tests for oral pathogens are extremely important.

And there's things you can do in the oral cavity. We blog on this all the time. We're fanatical about, you know, something as simple as, do you clean your toothbrush after you pull pathogens onto your toothbrush before you brush the next time and you're re-introduced that, you know, it gets that basic.

But, you know, what do you recommend do to, like, put it in hydrogen peroxide or like, what do you do anything. You know, I'm I'm, I'm a lazy chemist.

And so I just have a glass of salt water and there's salt at the bottom. That means the solution above is completely saturated. It's like the Great Salt Lake or the Dead Sea.

Nothing lives in it. And I actually had one of my participants is a ventilation engineer. And he tested this and he found no pathogens. So I just throw my toothbrush back into, the salt water every night, you know, and it softens the toothbrush.

So I'm not rushing aggressively, but I think water flossing is more important. Now. You know, you hear a Tom Levy talk about hydrogen peroxide and you have an oral microbiome.

So what I do with the I actually use it on iodine. I'll do an iodine water floss just once a week. You know just once a week to keep things down. But got so many people don't appreciate that God continuum.

They say, oh well constipation once in a while. You know on the continuum where does symptoms emerge? Like in diabetes? We have a little bit better understanding of continuum that anyone see at 6.4 than at 6.5.

You're diabetic. Well, you're way up the continuum already before conventional medicine diagnoses you with a condition. I would argue that in gut, if you are not completely regular, you are in the middle of that continuum and you have work to do.

We blogged. A husband and wife team out of Stanford showed very clearly that over generations, we've lost at least 50% of the diversity of our microbiome.

And that's what's doing all the work in our immune system. Breaking down foods. Minerals are the hardest to absorb. You've got to have strong acids. If you're ever on a Tums or even have those even if you.

Why I only have reflux when I have a Mexican food. No, you're up on the reflux continuum. You are not optimal. We need to move you back down. If you're talking about something as serious as a brain disease, thyroid, things that things of that nature, but sleep hygiene, these are the basic things.

But at the end of the day, I truly heart a heart and my research shows it that these subacute infections have taken hold. So now we have to get aggressive with really strong supplementation.

You know, the oregano oils, the biocides, the herbals, the medicinals. When I, when I did a study in a, corporation, I had 100 people that I had carte blanche to do any testing I want.

And I showed that when they had, they had every kind of condition, their every age, from pelican varieties to Parkinson's. And when they had a chronic bacterial infection, they had co-morbid virals.

So everybody should be on a viral protocol. Everybody. And what does the viral protocol look like to you? So a vital

viral protocol is periodically doing the Tom Levy high dose vitamin C recommendations and other people's recommendations, doing quercetin and zinc.

If you don't do it every day, all the time, then you do a month long type protocol. Vitamin D, you need to be up at 5580 nanograms per milliliter. You know, you need to get that up as well.

I recommend prophylactic and talk with, you know, Mark Hyman's old partner back at Canyon Red ranch. Microphone. As we heard at a roundtable, we all agreed that we would do an anti-parasitic cleanse every five years or so.

And, you know, the herbals work, but ivermectin is is superior. Now we know it's antiviral. So prophylactically do some ivermectin. You know, and what I recommend is not the anti-parasitic, you know, two doses.

You do 5 or 6 doses and then every other week for a year and, you know, you check your white blood cell count. So and see if see if they're coming up to the right level.

So that's really what we're doing. Medicinal mushrooms. Doctor Austin on my team is an expert. He goes out foraging for mushrooms, fungi every weekend.

And so he has a variety of, medicinal concoctions of, of the mushroom ilk. And, IFM included that in their list of, of antiviral protocols. But I tell you that the single thing that I'm bullish on, and Doctor Carter and I created a very lengthy video on this is cod liver oil.

And I was on the call and McCall and I debated this a little bit, but I'm not going to, you know, I hail to to Joe. So it's like I let that slide. But give you an example.

In 1848, in British hospitals, it was an epidemic of consumption, which is tuberculosis is so bad they're coughing up blood. They're on death's door and giving high dose cod liver oil with the vitamin A, the vitamin D, and other fat soluble nutrients that fish oil doesn't.

Having for a while doesn't have reduced mortality by 50%. And, you know, it's it's well it's it's well published and we have it on our, on our YouTube channel, a healthy viral plant.

And so, you know, it's it's very profound with cod liver oil. It can do. And if you worry about cod liver oil what I do is I do a simple thing. Same thing I do with probiotics.

I rotate them, you know, Weston Price Foundation I think if the brand is Rosedale, then there's green pastures, then there's Carlson's, then there's Nordic Naturals and there's, Garden of Life.

So all I do is I have one of each and I just rotate through them. And my secret number, based on Thomas Percival's work and famous physician from Britain in the 1800s, is 15g a day.

That's 15 capsules. And nobody wants to take 15 pills. So I take half a shot glass of cod liver oil and just shoot it every evening. Me, I eat a lot of fish, so I don't.

I may be lying if I say I do it every evening, but, you know, I, I mean, I'll eat fish twice today. So, you know, I feel like my, my brain anti inflammatory terrain is can is well-established and consistently refurbished.

And I think that's the that's the thing you know chronic disease I say it's all about knowledge and consistency. And and my biggest problem is is denial.

When they when someone says I just have a little of this. No it's not a little it's real. In the traditional medical world it's just a little bit. They'll write it off so that you're paranoid or it's nothing.

But in the functional world we need to we need to express to people that the mildest of symptoms. If it wasn't a one

off, even if it's monthly, you are not optimal.

In today's toxic world, you only have one choice to stave off chronic disease and live to 100 and fall off the cliff rather than sliding down that slippery slope.

And that is, you need to bring everything into optimal. Now, I will I will tell you that Doctor Trumps protocol for glaucoma and all of the timer's which we use now, and Doctor Carter on my team is reticent to do this.

So he'll do a more fully functional approach. But we use antibiotics. And I've mentioned earlier that a lot of functional treatments don't work. Why even Ken?

Still, I think he's a brilliant doctor. He has the highest pressure hyperbaric oxygen chamber in the country. But these organisms in their cell phase or refractory to that.

So you have to treat these organisms long term because yeah, they're maybe 10% active. The other 90% are hiding and they're waiting to come out when they see an opportunistic moment.

So if you keep a pharmacologically relevant dosage of whatever your anti-infective is, that's what you must do. So if you get on the Burleson protocol or a protocol or a functional protocol, and after four months you're saying I'm not seeing results, you got to stick with it.

It's the only way to overcome these chronic things are two things happen. Come on quickly. And if you don't die for them, they go away quickly. Chronic things come on slowly and they hang in there.

I try to explain, like in nature, everything follows an asymptote. What I mean by that is we're hardwired to say if I do one thing, I get result and I do this thing, I get another result.

But in fact, everything follows a bell curve. So you going into disease? I feel pretty good. I feel pretty good. And then all of a sudden you hit this inflection.

The bell curve, and then you feel crappy. But it matriculated for ten years, 20 years. Getting out of it's the same thing. Oh, I don't see any results, doc.

I don't see any. I don't see any results. You. We find that the it's at least five months to a true health inflection. Okay. And I see so many people it's like oh that functional doctor and work for me.

Now I'm trying this functional diet and it's it's. No you didn't give up. You got to give chronic protocols a chance to take whole. That's what are the big pathogens that you think.

I know you you mentioned chlamydia, pneumonia and periodontal. This. Does this like pigeon into valleys. Are there others that really stand out. Yeah.

Well, I think, you know, Lyme disease and all the co-infections, bartonella licky of things, of that nature.

Pathogens, Lab Interpretation, and Practical Prevention

But BRCA we, we look at, you know, the so-called there's so many co-morbidities. So we look at like all the usual suspects of chlamydia pneumonia, mycoplasma pneumonia, we look at age pylori in the blood, not in the stool because it will disrupt the gut, which then affects the brain, the enteric nervous system.

We'll look at Rockettes, you'll disease Rockettes, you'll type Rockettes, you'll get the, Rockettes, a corn eye, Rocky Mountain spotted fever. They're much more common than people think.

I was doing testing up at a company in, Indiana. I live in Tennessee, and the Tennessee Department of Health called me up because someone in Indiana was positive for Rocky Mountain spotted fever.

And, you know. But I tried to explain to the health department, it's like the reason why you're not seeing a lot of Rocky Mountain spotted fever. This was testing for it, right?

I mean, have you had a Rocky Mountain spotted fever test? No, I've never been tested for that. Most people have. Not exactly. Exactly. And then the other thing is everybody will tell you, you know, you do a food sensitivity test.

It's IgG. Then when an ECG test for pneumonia comes back elevated, every doctor in the world will tell you that's a historic infection. No, it's a stealth infection.

It's a it's a reticulate body infection. It's inside the cell in a biofilm infection. And you know, you all talks about this and, you know, this is Cox.

Cox, postulates for tech testing for carcinogenicity, but the chronic infections do not comply with Cork. I mean, he was back in the 1800s. Brilliant guy who's, you know, trendsetting in terms of this but you can't culture chlamydia pneumonia.

Right. So if you right away Coke's postulates it's gone off. But when we treat and just test IgG and the IgG is up, first of all, why is it considered elevated even by lab core?

Okay. Then we treat it goes down. If it was historic, why would treatment not a colleague titer. So let's talk a little bit about this because there is an alternative explanation right.

That that it is a resolved infection and that this is a representation of your immune memory. This is like what might happen after a vaccination that your IgG would be elevated IgG and would be normal.

So what you're suggesting is that there's a different explanation. Never that is not true. I will stand on that like what are we going to say 98%? Just because I'm sure there are circumstances.

But if the media pneumonia, we'll just pick on that organism was positive. GM at one point. We probably won't catch that just because of the timing. When you were exposed, all that stuff.

Stratton's work is beyond reproach. These are just like the the herpes zoster can reactivate. They live intracellular only. They are like hobos holding up where they can undiscovered, waiting for an opportunity.

No. And there's no question I would like to ask any doctor that has posited this that has a patient with an elevated IgG and treats them, and the exam is negative and they have symptoms, and the symptoms get better.

And the IgG comes down to explain that to me right there. You know, there's only so many. There's only so many explanations. No I'll give you an example.

So Doctor Trip years and years ago told me this and I reasoned I corroborate the research. So ophthalmologist an optometrist can see a Toxoplasma eye.

Toxoplasma gondii. I forgot to mention that very important intracellular parasite. You know, kitty litter. You worry about pregnant women being exposed to it because Toxoplasma gondii in the placenta can affect fetal brain development.

Well, can also affect brain development in an immunocompromised individual. Looks like Alzheimer's. But getting into the exam discussion. So a talk show scar can show up in the eye.

Very characteristic doesn't always. So it's not truly diagnostic for Toxoplasma gondii infection in the eye. But it does is a signature. So you run the labs IgG positive IgG negative.

You can extract surgically extract that scar and put it in culture. And guess what? It grows. Toxoplasmosis. Wow. So, you know, I think sneaky sneaky.

I think what I, you know, I run this health ministry and I always start off every session with where did you learn that? And so some things become urban legend or just become part of our culture.

And we're not questioning and titrating back. So in this paper that I really need to publish, but I haven't figured out how because it's like 25,000 words.

And the reason why is 25,000 words. Usually I don't accept the 5000, 10,000 max. Maybe even 4000 is because I need to explain IGA before I can go into this.

So I, I have reference after reference after reference explaining that an ECG titer is real. Okay. And doctor trap and 2000 said I don't run ECG anymore.

It's a waste of my my patients money because a lot of times I can't justify insurance with these tests in glaucoma or macula. These. So that's where I stand on it.

A whole new way of thinking about it. Or maybe, I guess, I like to think of the well-meaning instructors that I had who are pointing to this, interpretation, that there's probably some places where they're right, right where there are, times when when I represents what we've been trained in, I represents a current infection.

But certainly this alternative explanation for it opens up a window where people who aren't getting the help they need can be treated right. And and it's using readily available, relatively inexpensive tools to test.

And I think that's one of the themes of your your talk here is that there are readily available, relatively inexpensive tools. And if we interpret them in a way that's helpful, then and we use that to make decisions and, and to start treatment, then we can get really amazing outcomes.

You can and I and I have videos posted that I kind of hold close to the vest because a lot of people do not want their all the time in videos. But we had an 84 gentleman there, 84 year old gentleman.

There was nothing short of a vegetable that we reversed. So, you know, these are not these are not common things. But once again, a lot of people don't have the staying power, particularly older folks.

Well, let me give you one other food for thought in terms of this whole exam thing. When you die, you are no longer exposed to the environment, so you no longer have exposure.

Yet you start decomposing from within. And what he says very clearly in his book is they're already there. He was making a different reference. He's talking about plagues, and we've been exposed to everything.

So that's why he says this. He really say this. But I can you can infer from what he said that this SARS-CoV-2 is novel, very novel, because we've been exposed to everything, that the world is global.

But his point's well taken. They're already within. And so the difference between you decomposing when you die and you not now, is that when you die, your immune system is zero.

So everything lying in wait now has nobody, no nothing holding them back. You know, it's no different than the gut when you start losing stomach acid, all the pathogenic organisms start proliferating.

And the beneficial organisms, you know, our flagging because they've adapted to strong acid, right? Acid is certainly a line of defense. Right. Necessary.

Very necessary when Doctor Who is it has been so insightful, so wonderful to have you. I know you have so much more to share. But I do have to wrap up.

And I want to make sure that everyone who is listening, and watching knows how to find out more from you, because there is you just have a wealth of information to share.

And again, these alternative kind of interpretations that they may have not seen elsewhere, that I think are or is something that will prevent suffering for many people.

So I'm really excited to get this information out and want to make sure that, I stop babbling in time for you to tell everyone where they can learn more.

Well, so we run two websites, but I really want people just to come to one we run to so people don't get confused. It's like, oh, I have Alzheimer's. Why am I going to a chronic disease site? But our real site is health revival partners with an S healthy viable partners.

And that's where you know you want to work with us. And what I suggest is if you've been through treatment with Alzheimer's and you haven't got the results you want, I think I think we can add some Intel into that.

And the other thing is, most importantly, I want people to get pretreated before they have symptoms. And that's where I testing might be just the right thing to convince them that there's a neurodegenerative process going on.

So once again this all happens on healthy vital part. And Scott, thank you so much. It's super important. Especially not even maybe pre-symptomatic but early symptoms, right.

Instead of oh yeah the earlier the better. Yeah the earlier the better. So if there is a family history, if there's any reason to think that you might be, predisposed towards dementia, get this information sooner rather than later so we can start acting now, it is so much easier to prevent than to treat, and certainly so much easier to treat when it's early than when it is late stage.

So get the help that you need. Your loved one needs. Visit, Doctor Melissa's website and look at the show notes. It's also you'll be linked there. And thank you so much for joining us.

Thank you very much. And be well.