Chinese Medicine: A Unique Prescription For Parkinson Transcript

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Introduction and Guest Background

Hello. I'm Dr. Ken Sharlin. I am so pleased to present you with an interview with Dr. Miles Nichols. This is the Parkinson's Solutions Summit. We have this week numerous experts in the field of Parkinson's disease, clinicians, researchers, speakers, authors and so forth.

I hope you've been enjoying it. And I am especially excited to be interviewing Dr. Miles Nichols today. He is a functional medicine doctor. In fact, he certifies other doctors in functional medicine.

His background is in Chinese medicine and acupuncture as well. He is an expert on therapeutic breathwork. And I'm sure we're going to learn a lot from Dr. Nichols today. So without further do, Dr. Miles Nichols, welcome to the Parkinson's Solutions Summit.

Thank you so much for having me. Dr. Kenneth It's an honor to be here, and I'm looking forward to sharing some information and diving in together on some of the research and strategies that can be used for people struggling with Parkinson's.

Dr. Miles, would you mind just taking a minute or two and kind of tell us about your background. Explain a little bit about your interests, your training, your passions, and really ultimately, you know, how your work can help people who have Parkinson's disease.

So a little bit about my background. Growing up, I had a father who was deeply immersed in public health. He was a medical doctor. He also had a master's in public health.

He taught at the medical school. He founded a rural health office that sent mobile clinics out to help people get access to health care who didn't have good access.

And he then became a state legislator and then a state senator. And he started to work on policy and started to work on the level of trying to help to get laws enacted and get health care to people who didn't have access.

And when I was 15, I was babysitting for a friend of my sister and I got a call, some of those old school phones that are on the wall, that cream colored big thing, pick it up curly wire.

And it was someone from my family's church. She said, Something's happened. Your father's in the hospital. You're going to have to go away. And someone's going to come over and take care of this.

The babysitting job for you. And it turns out he had passed on suddenly and unexpectedly, and that threw me for a loop because he had top notch medical training.

And it was a surprise. And that led me on a journey to first deal with my own grief and work through what happened there. So I go deep in the meditation and the mindfulness practices, yoga, tai chi, Qigong, spiritual practices, trying to understand myself, my own mind.

And I realized that stress was a big part of what what really was contributing to my father. He was at the top of his game, his career, but he was dealing with a lot of stress and I recognized I needed to understand stress a little better, work with that.

Personal Health Journey and Root Causes

So medication actually began with the mind. I got my undergraduate in psychology and contemplative psychology, a mix between Buddhist and and Western psychology.

But I was struggling, like in my early twenties, with chronic fatigue, with brain fog, with several some neurologic symptoms, migraine headaches, really not understanding what was going on with my own health, which led me to my own journey to discover what was going on for myself.

And it got bad enough that I was pulled into the principal's office and I started to question, Can I even make my way through school? And that led me to get committed in myself to figure this out.

And it was a long journey, but it led me to discover a variety of things going on for myself, like a thyroid problem, antibodies against cells in my stomach, a stomach infection, and and multiple chronic infections.

Lyme babesia bartonella infections, mold exposure. It was a it was an ordeal to to to look through it all. But through that experience I, I got a lot of I researched a lot I was able to find and discover a lot of valuable information and that I was able to apply to my own health situation to recover my own energy and neurologic function, and since then have become quite passionate about working with especially inner logic issues in clients in the clinic.

And so I utilize both Chinese Medicine herbalism as well as functional medicine labs test a lot of brain neurological antibodies and work on figuring out what are the triggers for the immune system to be attacking the brain.

And that's become a big passion for myself. I ran the microbes and Mental Health Summit recently myself that was exploring that, and we looked at a lot of the different root causes for how and why these things occur and what to do about them for a host and variety of not only mental health conditions but neurologic issues as well.

So I am happy to be able to share some of what I've learned along the way with the viewers here today. Wonderful. It's very interesting. So one of the things we often talk about in our clinic is that there is an underlying biology to stress.

And stress can be physical stress, whether it's, you know, gut inflammation, gut permeability, what we call leaky gut, whether it's a chronic infection and even the stress and the inflammation that's driven by our own thoughts and feelings and emotions.

And ultimately it affects us in the same way through similar pathways, through similar hormones. It affects the immune system, it affects your mitochondria.

And so ultimately identifying what are all of those individual triggers is Dr. Miles is talking about and then really understanding, hey, not only are these triggers, but what are the things that are keeping us on that trajectory that's important too, so that we can ultimately take control of our health and change the trajectory, whether it was what you were going through and those college years and afterwards, or what our patients are going through who have Parkinson's disease.

Right. Parkinson's disease is a big name. But what underlies that name? What are the drivers of Parkinson's disease? And I think our viewers have a lot to learn from the experience that you went through because you were able to identify tools that really changed your trajectory.

Absolutely. And the underlying root causes, shoes tend to have some overlap in the neurologic world. There's absolutely I was looking at a research paper recently looking at gut microbiota changes in those with Parkinson's disease.

So we have this gut connection. There's this connection with infections and toxins to cross-reactive autoimmunity against brain tissue, but also changes and things like the dopamine receptor.

And so we see some data related to that as well. And and Chinese medicine has some interesting things to offer from another perspective that has a lot of similarities and overlap and connected systems as well.

And Dr. Miles, could you tell me a little bit about Chinese medicine? You know, I'm Western medicine trained and functional medicine trained, but there are so many different types of healers and practitioners from our past in ACA

paths, of course, natural paths, Chinese medicine, healers, acupuncturists, chiropractors and so forth.

And we all have something to offer in that toolbox that ultimately leads to healing. Could you share with me what this thousands of year old tradition is really all about?

When we talk about Chinese medicine? Yeah. So Chinese and Oriental medicine actually consists of five branches. A lot of people know about acupuncture and they think of acupuncture, sure, but that's only one of five branches.

Chinese Medicine Overview

So acupuncture is significant. It's important. It's been shown now in research to be helpful for neurologic conditions, pain, gut, digestive issues. There's and we can dive into that a bit.

And that's one of five. Of course, there's also herbalism and Chinese herbalism has been incredible. There's a what's called the Material Medica. It's a book. It's really thick.

It's full of all the things that you could possibly imagine, not just plants and animal products and minerals and and many things that are now being used in functional medicine today, for example, Berberine is very popular today and the Chinese are called Cup.

This root was used traditionally in Chinese medicine for some of the modern uses that Berberine is used for today. And Coptic is one of the richest plants in Berberine that we know of.

And so there are several things also popular today are things like Reiki, mushrooms and cordyceps mushrooms for immune function and for viral infections, even sometimes cancers.

And those have traditional use in Chinese medicine for similar conditions. It's very interesting that for thousands of years there have been uses that are just being researched and understood today and validated today that, oh, absolutely, there is research now that's supporting a use that was traditional for thousands of years.

So there's there's absolutely some very, very interesting in the field of Chinese herbalism traditional uses that research is starting to catch up with and understand how those traditional uses have mechanisms of action that we can understand in modern medicine and we can corroborate a lot of why and how those herbs have been used.

That's the second thing. There's three others. There's actually in addition to herbalism and acupuncture, there's a whole system of body work in Chinese medicine.

It's a more of a medical massage than it is a feelgood massage. But there are medical massage practices, and in traditional Chinese medicine, those included adjustments and they include very strong massage for injuries and different body work elements.

And then there's a whole system of movement practice. Qigong is the most common Taichi and qigong. A lot of people know those names now, but there's a whole system of what you might think of, like the physical therapy within Chinese and Oriental medicine, where specific movements are prescribed for pain conditions or even neurologic conditions.

And there's actually been some good research showing now that the brain and body movements can impact the brain significantly in how the brain hemispheres talk to each other, in how the brain generates certain of the neurochemicals in the brain.

So movement practice is also a pillar. And then lastly, there is nutrition and there's a whole system of nutrition within Chinese and Oriental medicine as well.

So it's a very comprehensive system, very sophisticated. And one of my favorite things to help people to

understand how sophisticated this is, is years and years and years before microscope were invented to be able to to the level to be able to see bacterial and viral pathogens as causes of disease.

A Chinese medicine was describing something called wind as a cause of disease. Now we might think what winds, not the cause. It's these bacteria or these viruses that are that are that are going through the air that are caused.

But if you look at the Chinese character for wind, old character, the original character, it's a character for air. And inside it is a character for insect.

And that's very interesting to look at the. Yeah. So they were saying, okay, there's this thing they're calling wind, which is a pathogen, but wind is air and an insect inside of it.

There's a very sophisticated understanding of some things that took a long time to scientifically prove within the Chinese medicine system. And so that's just a couple of tidbits about the background, the history and the comprehensiveness of the Oriental medicine system.

Well, that really is fascinating. So if I had Parkinson's and I came to you and you sort of gave me what I'd call the Parkinson's prescription from a Chinese medicine perspective, do you then, you know, and that's, by the way, in contrast, of course, to the traditional visit, the neurologist, they make the diagnosis and then they're treating the disease usually with the drugs, sometimes with other modalities.

But the main tool in the allopathic toolbox, of course, is the drug. But it sounds like you're going to maybe do some acupuncture, send me home with some herbs that are going to be important for my healing process, you know, a prescribe, if you will, a movement program, maybe do some body work.

Is that is that kind of how it works? We really touch on each of these areas. Yeah. Many times there is the capacity to touch on any and all of these areas potentially.

And in our particularly in my practice I'll if someone wants acupuncture in their in the office I will give acupuncture and so I do that however that's not my main focus.

There are many acupuncturists that have that as their main focus. I will say there are some incredible results from something called scalp acupuncture with utilization in relation particularly to neurologic conditions where needles are inserted into the scalp and stimulated in ways that I've seen incredible changes neurologically.

So and and so there are different types of acupuncture is not just general acupuncture. There are specialists who specialize in or logic focused acupuncture where are utilized that you scalp needles who are utilizing certain ear points that have different effects than general body points.

Integrative Parkinson's Treatment Approach

And good data is starting to emerge. But it's still early data, although we know certainly we can do a lot with pain centers, we can do a lot with some of the motor centers, some of the rehabilitation for people who have struggled with stroke and some of the people who are struggling with Parkinson's may benefit greatly from acupuncture.

So that can be a great one. I personally do more of a functional medicine focused forward first approach with lab testing for causes, and then I'll utilize herbal Chinese herbals as part of the treatment in many cases, as well as sometimes some movement and our mindfulness based practice as mind body practices, which can include breathwork can include movement practices as can include meditation.

Practice is interesting. If one patient has tremors, stop during meditation, but not lasting when he's not meditating. And and so it's interesting. It gives him hope because he knows that his body has the capacity and the capability when his mind is in a certain state that his tremors can stop.

And that's very interesting to him. And so so we might utilize a variety of mind body approaches plus nutrition

supplements and medications as well in the functional medicine approach that is informed by Oriental and Chinese medicine.

And then acupuncture could be a part of that as well. That's very interesting. In in our clinic, we use the term the toolbox, and usually there is many things in the toolbox and just like you wouldn't use a hammer if you're trying to turn a screw, we have to decide what are the right tools for that individual person.

And thus the approach to the treatment of Parkinson's disease becomes highly individualized, you know, and that's in such contrast to what often happens in doctor's offices around the country and many places around the world.

You know, 5 minutes with the doctor, they make the diagnosis. Here's a drug. I had a patient not even get prescribed a drug while they were in the office.

The doctor didn't even explain anything to them and sent in a poor description by the mail and they were left to figure out what this was, what they were supposed to do with it.

How is it important for them and so forth here? It sounds like we have all of these different ways that a person who comes to see you can be helped and you're going to dig into your toolbox and really come up with the right plan for them.

Yeah, absolutely. And and to be fair, I mean, in an insurance based system, it's hard to have maybe ten or 15 minutes, I think, visit some some visits are getting pushed down to 8 minutes.

And and people unfortunately doctors are being pushed to see 6 to 8 people in an hour. And makes it hard to do anything meaningful other than to make a diagnosis and write a drug prescription.

So I have a lot of sympathy. A lot of people I think want to do more, want to spend more time, are just trapped in a system that is encouraging that kind of behavior.

Like this one. So I have to ask and I know when I spend lots of time talking about functional medicine, but if you don't mind, just just for me, if you will, I have a lot of patients who do seek out acupuncture or ask me, would acupuncture help me?

And of course, you've explained there are many types of acupuncture. If you don't mind, could you just tell me just a bit more about what what is this sort of ancient Chinese belief about acupuncture?

What is it doing from that perspective? And then just briefly, if you can share some thoughts about, you know, what are we discovering about acupuncture from a scientific or research perspective as well?

Yeah. So the traditional understanding in the eastern based traditional Chinese medicine approach is that the body has what are called meridians, and meridians are connected with organs systems, but they're on their own along pathways.

They're like pathways along the body. And so, for example, the liver has a and a system of a meridian that that it it goes from the foot, from the bottom of the foot.

It goes up the leg, it goes out, and then it goes near where the liver is as well. But there's this sense that there are these different meridians connected with organs and these meridians have points, what are called acupuncture points on them.

And these points have different functions. So there are points along the liver meridian that treat something called liver, wind, liver, wind is one of the diagnoses that happen with many neurologic conditions, including Parkinson's, including post-stroke every several things where liver wind is thought to get trapped in the body and create tremors and create problems in the brain and brain function.

So someone might get diagnosed in Chinese medicine with having some liver and and then a point or multiple points along the liver meridian may be used to help to clear that trapped wind from the body.

So that would be one way in which Chinese medicine might start to explain. And usually it's going to be a little more holistic than that.

Acupuncture Theory and Research

There's going to be also a sense that there probably is some digest device or something called spleen deficiency or stomach issues that are going to be diagnosed together in Parkinson's cases, many times together with a kidney deficiency.

And this is akin to adrenal dysfunction in functional medicine or maybe maybe even mitochondrial dysfunction, depending on what kind of kidney imbalance in Chinese medicine.

So there are parallels that we can draw here. And then often blood status is diagnosed as well, which you could think of as vascular issues and maybe issues with veg AFF or vascular endothelial growth factor in the the Western medicine perspective.

And one of the things that I find that's brilliant in these Chinese medicine descriptions is there are things that can be described in Chinese medicine in a way that have metaphoric relationships and parallels that can easily for someone who really understands both languages, be understood in a Western medicine context as well, or a functional medicine based context as well.

For example, there can be this description of something like in Chinese medicine, there may be a description of this kidney yin, which is nourishing and nurturing the body's ability to cool itself, leading to there being excessive heat, which can be easily paralleled to inflammation.

And there can be this sense in Chinese medicine where it talks about stress leads to the liver, over acting on the spleen, leads to digestive issues. And we know stress can cause digestive issues, some research on the western side.

So there are a lot of parallels that are that are interesting to draw, and the language is different in the languages, interesting and overlapping when it comes to what the procedure of acupuncture is.

The procedure of acupuncture utilizes these meridians and points on the meridians. You might insert a needle into kidney three and liver three and stomach 42.

And so there's different what we call point prescriptions and these point prescriptions to help to clear some of the liver, wind to turn ify the digestive system, to turn off the adrenals and build those back up and to help with some of the stress, the liver over acting on spleen, maybe to move the blood into the vascular tissues better if there has been some low we know hypoxia, low oxygen have a relationship in Parkinson's.

You might in in the Chinese medicine diagnosis they might say blood status and then you're moving the blood to get that access to the tissues for oxygen to be carried there.

So these are the kinds of correlations that we can have. And when it comes to the research on what is it actually doing when you insert a needle into the skin, These are early days, but there's something along the fascia in the body that seems to have these pathways that are not fully you.

It's not fully measurable like a meridian is in Chinese medicine are you can say this is the exact pad pathway that accesses this particular organ system, but there are definitely empiric points where you can say when you put a needle in this point, empirically constipation gets better and then it makes sense as to why that happens.

If you do look at the Chinese medicine philosophy. And so there are there are studies what are called empiric point

studies, and then there are studies that are looking at the subtle electromagnetics in the body in the fashion things that are looking at maybe these microcurrent or these electrical currents that are flowing through the body and trying to determine that perspective on it.

And then also maybe local to where the needle is, some localized inflammation that is very small inflammation that may be what we call a for medic inflammation that recruits some attention from the immune system to that area to bring cytokines, to bring certain repair proteins in there.

And that may have an effect in that area. And it's very clear from studies now that pain reduction is substantial and significant. The military uses are regular acupuncture on evacuation planes now has reduced opioid use by about 50%, which is fantastic for people who are injured.

So so there's some really good data showing, okay, there's something to this, but it's hard it's hard to pin it down into, here's exactly what it is. That is really, really fascinating.

And I'm just I'm just wondering because I'm very interested in sort of narratives in medicine and narratives tend to be very culturally linked as well.

So as sort of an American Chinese medicine expert and acupuncturist and, you know, functional medicine expert, do you have to do you find yourself sort of a adopt or adapting the narrative itself as as you're working with the patients so that you're kind of bringing a more Westernized kind of belief system into this perhaps integrative Chinese medicine work that you're doing, if that makes sense.

I mean, what I understand liver, wind, for example, right? But maybe there is a different way that you might explain it to me. If I was your patient. Exactly. Exactly.

Yeah. Yeah. So so absolutely. There's translation that occurs there. And I, I tend to not use the Chinese medicine language unless someone understands that language specifically other than to say that, you know, we have this whole perspective on diagnosis that you can think of as it's related to your digestive system and your nervous system.

And stress are playing a role here. And there's some oxygen delivery to the brain playing a role. And these are some of the areas that we're going to treat instead of saying spleen deficiency and liver wind and, you know, these kinds of terms.

So we might definitely explain it in a different way. The parallels are there, though, for the people who do understand that language or are interested in that language, then, you know, I can speak to those parallels.

Mostly I like I just help people to understand a little bit about the the meaning in a easier to understand way for them. Excellent. Now I have to I want to kind of segway into functional medicine a little bit.

And I have to tell you, I saw this piece on the news the other day where they were interviewing a gentleman who took his time to actually look at changes in the bacterial, if you will, content of cake icing when it's a birthday cake and a child blows out the candles.

And they said, well, basically there's very little bacteria until the person blows out the candles. And then there's all kinds of oral bacteria that come out in the vapor that you don't necessarily see when someone blows out candles.

And their message, of course, was, you know, they were almost horrified by it. And they're saying, you know, think twice about blowing out candles because you're getting all this bacteria.

Functional Medicine, Microbes, and Neuroinflammation

But I was thinking as a functional medicine doctor, as long as they're not, you know, sick with cold and or something like that, sort of bring it on. Because, of course, we're keenly aware of this overly hygienic, you know,

society that we live in where I'm like, hey, kiss your dog, you know, but that maybe that's just me.

But that kind of brings things into wind and microbes and then thinking about functional medicine and how does that, you know, really apply to what we're doing, where we're actually taking this big name diagnosis and then breaking it down and really understanding why it is we get sick, how do we get sick, and what can we do to change that pattern?

What is your approach? Yeah, thanks for bringing that up. It's absolutely important to look at bacterial diversity, look at, you know, studies that show that Amish children who grow up with less allergies and asthma have, of course, far more exposure to many different kinds bacteria on a farm setting.

And so there's a lot to their that I mean and gut gut dysfunction bacterial genes that's been researched and connected with so many things. Both the Chinese medicine perspective on the gut playing a role in Parkinson's.

And then we now have Western research that suggest and show that bacterial connections are there and we see this gut brain relationship, we see the vagus nerve connection, or the gut is sending soup to the brain via the vaguest.

We also see that the gut can become permeable. We can get in, we can get leaky gut or intestinal permeability, and then gram negative bacteria can get out of the gut into the bloodstream and they have LPs or Lipopolysaccharide in their cell wall.

And that's what we know to be an endotoxin. And that endotoxin creates an inflammatory response in the body where the immune system's trying to get it out.

And that creates what's called a neuroinflammation in the brain. And we get sometimes leaky gut, leaky brain. I was on another summit recently giving a talk called Leaky Gut.

Leaky Brain. And we have the blood brain barrier that can become disrupted and then those cytokines, those inflammatory proteins, can make their way into the brain and can contribute to the development and onset of multiple different kinds of neurologic conditions.

And and that the Chinese medicine, language of liver, wind, and I described wind as having that insect inside of the air that we also are now seeing connections with what we call infection induced encephalopathies, which are encephalopathy, is a term that's a change in the function or the structure of the brain tissue.

Many of these are autoimmune where the immune system starts to attack. For example, dopamine receptors in the brain or may attack glycine receptors or may attack tubulin or other structures or the cerebellum which is in charge of movement, or the Perkins cells in the cerebellum, which are related to movement.

And we can start to see why some of these issues, these neurologic issues are forming. If the immune system are attacking structures that are trying to regulate these functions in the body.

And we have a lot of data now that show that infection and that become chronic can induce a cross-reactive autoimmune process that can attack brain tissue and structure and function and impact brain function.

And so when we look at something like liver, wind and we say liver wind trapped in the body and we understand that liver wind that wind has this, you know, some kind of a little insect or some kind of a microbe in it, and it's getting trapped in the body.

And now we're starting to see this research that we see that, oh, actually a viral infection like Epstein-Barr or maybe COVID or many kinds of bacterial infections like Lyme or Babesia or Bartonella, for example, they can induce something called encephalopathy, and that can create cross-reactive auto immune response against the brain in those who have genetic predisposition.

And that can lead to stiffness and trembling and issues with dopamine. And we can see a lot of these connections. And so there's a brilliant overlap here and where the research is, where functional medicine is getting to, where Chinese medicine is getting to.

And we see this this synergy between a lot of the data out there is saying gut issues, chronic inflammation, neuroinflammation, infections, toxin accumulation are mitochondrial dysfunction, are at the root of a lot of this.

So we can go a lot of directions with that. But that's maybe a big picture overview of the landscape that aligns really well between functional medicine, approach an Oriental and Chinese medicine approach.

And ultimately approaches that allow us to address all of these. So I can't just, you know, allopathic medicine might say, Well, I'm just going to treat your mitochondria or I'm just going to treat, you know, this infection.

But in reality, we have to take approaches that recognize and embrace the fact that when there is a problem like Parkinson's disease, there is a multitude of functional systems that are involved that ultimately become out of balance.

And so the therapeutic approaches have to be able to address all of these systems more or less at once, such as, you know, well, food is medicine and food does all kinds of things for our mitochondria, for our immune system, for gut health and so forth.

If we're really going to see that change. Doctor, I know that we just have a few minutes left and I do want to make absolutely sure that folks know how to connect with you and the things that you have to offer people with Parkinson's.

But I did also want to ask briefly, because I know this is super important, is could you just briefly explain the comedic hypoxemia that is related to Parkinson's disease?

Yeah. So hypoxia, interestingly, has a mixed bag when it comes Parkinson's. So first hypoxia that's low, hypo is low, and then oxygen, oxygen. So when we're looking at low levels of oxygen or oxygen in the brain, that's problematic.

In general, if we're looking at chronic and if we're looking at significant levels of oxygen deprivation to the brain, there's something called hypoxia Inducible factor or HIF.

It's a transcript factor plays an essential role in cellular response to how low oxygen levels occur and form. And studies have found that activation of that can actually influence dopaminergic neurons survival.

And that's critical in Parkinson's. Now when it comes to hormesis hormesis is a concept that means that a little bit of stress actually can create benefit, whereas a lot of that stress could create detriment.

Hypoxia, Hormesis, and Breathwork

For example, weight lifting is a great example of this. If your muscles, if you just left heavy weights for hours and hours and hours on end, you're going to tear that muscle fiber apart, you're going to damage it beyond repair and it's going to have a really you're going to be injured.

It's going to be a problem. However, if you do a controlled of the weight well, there will be some actual lactic acid release, maybe a little bit of muscle fiber break down.

It's going to signal a bunch of things in the body. If that if you didn't get injured, it signals things in the body that tell the body we need more muscle.

And so it's going to build that muscle and you're actually going to get an increase in muscle mass if you have the building blocks and the nutritional backbone and the essential amino acids in enough calories to do it, your body

begins to initiate that building up of more muscle so you can lift more weight later.

Similar with hypoxia, while too is very, very, very problematic and damaging to the brain and can play a role in the pathogenesis of Parkinson's, there are what are called intermediate or intermittent hypoxia training, intermittent oxygen training or IHT for short is a way of in animal studies, for example, they've actually shown that IHT has demonstrated neuroprotective effects and specifically neuroprotective effects against dopaminergic neuron loss and has led to improved motor function.

Now, animal studies don't always translate to humans, so we have to be cautious when we're looking at animal studies. So that's just a these are these are early day studies.

However, there's also there's some high altitude exposure studies that are looking at least once they found that that in high altitude environments, which does create an intermittent hypoxia because you have less oxygen, that that was also helpful in the symptoms among people with Parkinson's disease.

And this was actually looking at people and whether it was looking with Parkinson's disease. And so those low oxygen levels and high altitude actually may play a role.

And in the further some of the mouse studies have looked at mitochondrial function improvements through putting animals in these basically hyperbaric oxygen chambers, which normally would increase levels, but they decrease oxygen levels to simulate high altitude and being at maybe 11,000 12,000 feet elevation.

And they're seeing incredible mitochondrial benefits. And this may be because mitochondria are in charge of making anti-oxidants. And we if we have the right amount of stress, traumatic stress, like we know that if you take something like green tea, green tea has in a compound you see in this compound is actually oxidative in nature, but everyone calls green tea an antioxidant because it's a comedic oxidative response in the body where.

That's a little. Bit oxidative, but it makes the mitochondria make more antioxidants. So you get a net antioxidative effect as a result, similar with the right controlled hypoxic training, we know certain breath techniques, for example, will induce a short term hypoxia that will lead to greater recruitment of things like hemoglobin and the oxygen carrying capacity in the body.

How to Connect with Dr. Nichols

And we'll see a response in in greater of oxygenation as an end result of a short term hypoxia, just like we might expect a stronger muscle from weightlifting.

Most like working out at altitude. Well, Dr. Miles Nichols, it has truly been a pleasure to visit with you, and you've definitely piqued my interest in all of these areas from all dimensions of Chinese medicine, including acupuncture for functional medicine or medic Hypoxemia Tell me how I can connect with you if I'd like to learn more.

My clinic website is medicinewithheart.com and there's a free blog there. Lots of information, lots of articles that come out on these kinds of topics and other interesting information freely available on medicinewithheart.com Also for people who do want to find out more about working in the clinic, there's the ability to book a call, a discovery consultation with one of the staff at my clinic at medicinewithheart.com And that's the best way to find out about podcast interviews, summit interviews, talks and other information is at that website.

So medicinewithheart.com best resource for people. You've been listening to the Parkinson's Solutions Summit. Today's interviewee, Dr. Miles Nichols, thank you so much for joining us and looking forward to reconnecting in the very near future.

Thank you so much. Dr. Kenneth And thanks everyone. Take care and have a wonderful day. Bye bye now.