Cutting Edge Therapies For Treating PTSD in Long Haul Transcript

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Introduction and Dr. Cook's Background

– Welcome welcome everyone to another edition of Overcoming Long Covid and C. F. S. Today I guess it's actually this evening I'm just so excited to have an old friend of mine Dr. Matt Cook of bio reset in Campbell California who's joining us. And Dr. Cook has been someone we've shared a lot with over the years and we learned a lot from each other.

It's really a pleasure to share patients and ideas with the Good Doctor Cook. And when it comes to Long Covid he's got some really I think interesting ideas that that we haven't explored much in the rest of the series.

So Dr. Cook good to have you. But first give people a little idea of like your background and what you've been doing the last 15 years. – Okay great well thank you so much and I'm delighted to be here.

And as I was trying to work my way through the day I just just just like many days I had just a very unusual thing show up and I said and I said oh my goodness what what could possibly be going on in this unusual thing that I've never seen before and I thought about it for three seconds and I said oh I know I'm talking to Eric Gordon in this afternoon, I'm going to ask him and so thank you for being you and being so helpful to my education and thought process over the years. And I needed it because I um after medical school I did a residency in anesthesiology.

And and then my um my job basically I was I worked in surgery centers and was a medical director for surgery centers. And I would do ultrasound guided nerve blocks to put nerves to sleep so that we could do surgery with sedation with ketamine.

And so then that was fundamentally my life and I um I did that until I found out about 12 years ago that you could start putting other things around nerves sometimes dextrose. And other products that basically expanded into what is now we think of as regenerative medicine.

And because we do in anesthesia, I had a lot of experience doing I. V. Therapy. We began to combine that with I. V. Therapy functional medicine and have been trying to build this sort of synergy between functional and integrative medicine and and then a lot of the interventional procedures that can be done to help people.

– Yeah and that's been a wonderful combination. You know I think it we many of us in this field have had exciting ideas of where we'd like to put things but you're able to do it for us.

How Long COVID Fits Into Complex Illness

So we really appreciate that because that is the secret is you know knowing where you are with the needle and the ultrasound and that ability to put those two things together with what's really really been exciting and where I think are you know sharing has been so helpful in thinking about what's going on with these folks because, you know, over the years, you've you've been including a lot more chronic complex illness in what you do and sharing that experience.

And that's why we're talking today because as we've discussed for our patients is covid. Long Covid is another chronic complex still misinformation is hanging around and though there's a lot of similarities to chronic fatigue, it's got a different flavor on a lot of levels, you know, and that's why it's so important to be exploring it. So when what how is how are you approaching the long the long we called long haul patients? I don't know, I don't know what to call people with with, I think I don't like that.

What do you? – I'm not sure that I like that title either, although I guess if people like using it that then that's okay. It's such a good one. And I'm actually grateful that right from the very beginning we probably took care of one third functional medicine, one third athletes and one third complex illness.

And interestingly each one of those categories kind of helps us contextualize and understand the other areas. And I always say that what works for somebody in complex illness works for the other groups of people.

And in a way, I think that's because complex illness is just a spectrum of all of the things that ail us, but it's just worse and you know, when we think about, you know, the and we were talking about this before we got on the zoom, when we think about complex illness, we think about mold and lime and the co infections and Epstein Barr and M. E C. F. S.

And and fundamentally I think there's a lot of people in our society that have had that stuff in the background and a lot of, a lot of the times it may have been bad in the past and then it got better or that may have been really bad in the past or it may have been kind of mild in the background and it was bugging them and they may not have even known that they had it and often what will happen is we see people and and they go through sort of a catastrophic stress, either a big gastrointestinal problem that causes leaky gut and stresses out their immune system or PTSD and trauma or some other infection or some crazy event that triggers their immune system and the immune system gets kind of dis regulated and then begins to struggle, keeping things that may have been in the background and all of a sudden that comes to the forefront and that might be kind of a script of a patient that a lot of us have seen and what I found is is that with Covid, Covid is often kind of that trigger that can can trigger some of those other things to come to the forefront.

And so then that might represent a percentage of long haul Covid is Covid just creates a huge immune stress. And then some other things that were in the background come out. That's topic A But then within like two days of when the article came out that there may be a covid reservoir e that covid may continue to live on in the body as an active infection, kind of like herpes or some other infections do.

Then that may continue to trigger an immune response and then long that may trigger immune stress independent of those other things. And so we probably have a bi modal distribution where sometimes we're looking at a constellation of all kinds of things.

And then there may be another version of long Covid that is almost just purely covid related. – Yeah, no, I like that way of looking at it like one on one hand, Covid is what unmasked the previous weaknesses that were just often kept in check.

And to, you know though we I've been trying to do deep dives and it's very difficult and whether code is really as they say replicating or or replicated competent virus chronically which or are we just stuck with a reservoir of proteins. And that's hopefully we're gonna get the answer to that. You know, I'm hoping that we'll know, but we do know the spike protein hangs around long enough that it can be causing long term part some of the people and I like the way you broke it down into two because it doesn't do that for everyone, you know. And so it's a good framework.

– But then that framework I just realized as I said, maybe we should say three because maybe the third one categories that Covid virus that is continuing to live in a reservoir.

And you told me this. And then I gave a keynote on Long Covid and I had a slide of the picture of the movie Reservoir Dogs that I put in and I said it's because there's a reservoir where it's hiding out maybe for example, in our gut, there's that third category that you brought up is it may be that Covid is long gone, but there's still little fragments of Covid that are floating around that our immune system is really triggered by that's creating immune stress.

And so then that that that that creates this third category, that is not Covid is gone. And and maybe there's not even Epstein Barr or anything else.

Brain Fog, Anxiety, and Stellate Ganglion Block

But then often our journey is diagnosticians is to try to peel the onion and figure out of those three groups what's happening – And are and you know, I said as as we've discussed in in other parts of the series, there's you know,

and then we have the issue of the micro clots and the question of antibodies which increases some of the need for the therapies that that you're quite expert in as well.

So it's I think what we can let people know and I think this is what's important is that don't assume when you go to a doctor and they tell you what's causing your long covid even if it's somebody who's who is good at treating this that they're right because there are many possibilities here and we kind of have to work through them.

And I think that's what's difficult for patients. There is to the medical model where you do a test and you get a diagnosis and that's what you got. You know and here we're dealing with what we what we deal with in chronic complex and this all the time is that you've got about symptoms and we've got some tests and then we got to see how you respond.

And it's a little bit more of a journey sometimes than – 100%. And so then the that micro clotted example I think is you know, a great one because there's every of all of the three categories we discussed then they all lead to a constellation of downstream dream sort of effects that can affect how blood flows, how in the body and how our mitochondria are functioning, how are how much energy we have, how we feel. And so then, you know I would say it's definitely worth a deep dive in terms of diagnostically thinking about things.

But then, um, you know, we like to try to work on trying some things to just to make people feel better as well. – Yeah. Well, I think that, you know what I'm realizing, what's fun about having this discussion with you is that we're just like naturally ambling through the thought processes that happen, you know, and like right first step is often to use what I call band aids, but I love band aids because they stopped the bleeding and they, if you can get someone to feel a little bit better, a little less stressed, a little more space, improve their sleep. Any of the symptoms that we can improve will strengthen the system and perhaps allow a more a more relaxed and therefore more effective immune response because, – You know, that's a good one. And as you think about the diagnostic criteria, you know, we were talking at the beginning that probably many of us are somewhere on the spectrum of some of the things that I mentioned, many of us may test positive for Epstein Barr. Many of us may have had a significant amount of immune stress or some pTSD or you know, some vascular problems that could be complicated by clots. And so then what happens is is where there's this spectrum, particularly with the immune stuff.

And imagine over here, the spectrum is a lot of symptoms. But as you come over as you shift to the left when we have less symptoms and so then everything that we know of that is good, mindfulness, meditation, sleep, optimal diet, all of those, you know, bio hacking lifestyle kind of wellness kind of strategies have the possibility of shifting us to the left and then often that that leads to an optimized immune system and so optimizing G.

I. Health. And so then when, you know, we always think about those things and when you begin to think about the fact there's gonna be tens of millions of people with some amount of long covid and you know, you can't forget when you think about the long covid of the emotional and psychological and psychiatric stuff that goes on because I can't tell you how many people we've talked to who got depression or anxiety or kind of a fair amount of stress going going through the Covid experience and have a hard time coming back.

– Yeah, I just had a patient call today, someone I've known for a long time who's had battled with chronic illness for probably 10, 12 years but you know, functional, done quite well, but just has to be careful and she just has acute covid and she's suddenly feeling anxious, you know, and it's it's it's it's the bug, you know, when the inflammation goes transient li up people get you just part of protecting, you know anxiety is is one of these self protective responses of the body, it just should be transient like and if it stays stuck it gets very unpleasant.

And but you know, Covid obviously does this I mean has so many neurological effects that just the infection itself and then later on the the the the prolonged immune response. So – Okay, so then let's start with this one.

So what we all know that Covid can go to the brain, it likes to go to the brain stem. So we all know that covid can go to the brain. It can cause you to lose your smell and taste. We also know and we we know that with Covid won a lot of people ended up with PTSD and that's because one of the the limbic system is right there, it's right, very close to the brainstem.

And what I think happens is is if there is inflammation in that part of the brain, then the side effect of inflammation in the limbic system is that we feel anxious and we feel depressed and the whole constellation of emotional symptoms.

And so to be honest, I got Covid several times and and Covid vaccinated and I got a little bit of that myself. And so then I did what any doctor does is to use the tools that you happened to have.

And so we did a I did a stellar ganglion block. And it was my favorite treatment that I've ever done for myself because what this ganglion block is, is it's an injection where we put the fight or flight nerves asleep and the way that we do it now is we treat the fighter flight nerves and we also treat the vagus nerve and we put them both asleep. And the idea, I always say, imagine if the, your body was kind of was assaulted and was kind of ready for a fight and then the fight or flight nervous system just got turned off and now you're just like, oh, hey, Eric, how's it going? And you're just in this kind of total relaxed state and it breaks kind of the perceptive loop of the fight or flight state.

And the other thing that it does is that but we use rope piva cane, which is a local anesthetic and it increases blood flow to the brain. And so then one of the things that happens is when you increase blood flow to the brain. One of the first things that the carotid artery does when it goes up into the brain as it goes to the limbic system.

So you're sort of resetting the limbic system with increased blood flow and that can be fairly profoundly helpful. And so we do this for victims of ptsD and trauma, a lot of military, lot of assault.

And but then we have been doing it a lot for people with complex illness because having complex illnesses kind of like being a victim of trauma because every day you wake up to the same thing that you can't believe is continuing to go on often for years and years and years and so then that is a fairly big reboot.

We like to do it on both sides and so we'll do often one on one day and one on the other day. And then we we've developed a whole constellation of I. V. Therapy that we do around this delayed we give vitamin C. We give glutathione, we do a lot of magnesium to basically kind of relax the blood vessels and that seems to be a fairly helpful part of it. And then we developed this approach there's a I. V. Phosphate alkaline.

This seems to be really good for blood vessel health. And so we started doing that after this desolate and the interesting thing the still like England block will increase blood flow to the brain.

And often when you get it you'll have a little bit of a headache that night. It's a little bit rough to go through. Your eye gets droopy, your pupil gets small, your eye gets red, you can't breathe and one knows voice gets hoarse so it's a little intense of a thing to go through.

Once we started doing all these I. V. S. It was just much smoother and then people the headaches were cut in half. And so then we we started doing this and and I would say of everything we've done it's one of our most effective sort of long covid treatment strategies because it represents a fairly powerful emotional reset.

And the we think of the right side of the body is kind of trauma left side as cognition. And so a lot of people will tell me I started to think more clearly after we did the sell it on the left side. My brain fog got a little bit less.

Now it may be the brain fog is from just acidosis and hyper coagulate ability and decreased blood flow in the brain. And so because of an an immune stress and angiogenic stress.

And so the blood is just blowing a little bit more thick. But it may be that we're having an immune reaction to some of those um that spike protein that's floating around it may be that Armani sites are active in the blood and they're thick and not moving around. But the Stella has been pretty helpful in terms of a reboot or reset. That's why I called my company by a reset was after after this desolate. And so then that's been a probably my favorite kind of innovative thing that we do for long covid.

– Yeah it's one of those therapies that again it's just letting the body find its way back. You know some people

considered invasive but you know, it, you know, again, under ultrasound control, it's not it's a relatively simple you know, someone who's experienced think that those two pieces are probably important and it really is allowing the system to find a new balance point. – Right? Right.

Immune Regulation With Peptides and IV Support

And then this and that is a I always say if and this is was my feeling going through. It also is that when when you turn a computer, if we turn our computers off and turn it back on, that's a lot of times that your computers, if there's software is not working, you press control all delete or you got to turn that computer off and it comes back on at the factory default settings. And then this has been a lot of our experience.

And so then that becomes one of several very interesting sort of approaches because if we can begin to kind of reboot the mental, emotional spiritual state a lot of times, then that helps us kind of reset narrative and get people feeling a little bit better and like there's some hope.

And so then that has been a pretty transformative li positive experience for us. – Yeah, I mean, it's really funny, you know, going through this series and talking to, you know, many doctors and just some patient advocates and scientists, but at the end of the day, the need for hope, the need to for the alignment of the spirit to believe that you can get better. You know, because you know, people just forget that the placebo effect is not an imaginary effect.

It is your body's innate ability to heal. And that's what we all need. The drugs are in there just to get us over the hump. Okay, you know the drugs buy us time.

You know, I mean medicine does its best with trauma because what we can do with trauma is we can buy you time, we can stop the bleeding, we can put the system back together enough so you have time to do the healing and it's your own healing that gets you well.

And when you do something like this ganglion block or the other things that restore hope and get rid of the the script of hopelessness that happens after you've been ill for a while. Yeah, you really allow for this.

You know, it's not magic. I mean this wondrous place where the body can heal. You know sometimes it needs a bit help, but if you're receptive you can use the help, – Right. And you know the I studied meditation with this wonderful tibetan lama lama Lar and he in taus and he always said only a terrible doctor wouldn't use the placebo effect. But you know the other thing that we will use is ketamine and ketamine is an anesthesia drug that you know, I used all the time in the operating room and then, you know, that also can lead to a shift in consciousness and help break some of those perceptive loops. And um but then I think whether you use academy or whether you used to steal a ganglion block or whether you just have an amazing conversation and help to reset the narrative that way.

And I would say that's probably my most favorite thing to do is just try to um come to a, have a little bit of a coaching session of teaching people how to run a narrative that everything is going to be okay. And then I use these techniques often just kind of as training wheels to kind of lot of times what happens is you leave some little breadcrumbs in your mind of how you, how you were able to go from kind of a sketchy state into kind of calm and often that is is enough to to reboot you back into kind of where you were before. – Yeah, that's beautiful.

That's beautiful. I think that yeah, story is our teachers. – Yes. And so then, you know, I'm glad we started here because then that's an important narrative.

And then understand that then with that in mind it's fairly easy to see that how if you reboot your fighter flight status, you might shift over into a place of being kind of in a more mentally, emotionally spiritually stable place, I think that the immune system works in a similar way.

And so as you know, many of the favorite things that we like to use as modalities regulate the immune system. And so they kind of bring a little balance and then at a at a high level kind of as we go into kind of physiology along Covid.

one thing that I have found is that in almost no matter how you break it down between those three categories, in all of them, the immune system is fairly stressed out. It's either stressed out because it's fighting a new infection or it's reacting to some proteins that are sticking around or maybe it's reacting to virus that's still there. And if we can bring a little balance to the immune system at large, often that can can lead to people feeling quite a bit better and start that's and that begins a little bit of a reset process.

– Absolutely. I think what I try to remind patients is that it's rarely the virus that makes you really sick. It's your unbalanced immune response. I mean, that's why people die from covid in the hospital, not from the virus, but from their own immune system. And it's this.

I mean it's one of the things where you're gonna hopefully explore in some of our sessions is how the loss of the the balance between the T cells and your B cells and their inability to control the innate immune system.

And and it's the beauty again what you were saying is that when the mind is doing what it should be doing then it's gonna give the information to that immune system because the immune system. You know I said we we we have said this many times in this in these talks that we break up the body into systems in order to talk about it because we can't have a conversation unless we define things.

But that's us your body doesn't know from immune system. You know you it's just how you flow together. It's a great symphony and dance of energetic six.

And when the mind is calm the signal to the immune system is to stand down a little bit. And then the symptoms do get better and we and healing can happen because when you know it's hard to finish the healing journey when the message is still there's a tremendous amount of danger President.

It's I'm trying to get one day I want to get Dr. Navio on because he unfortunately doesn't like to be on video. He gives great lectures but I'd love to get him on video. You can discuss the nuances of how relaxing the mind and relax and it just all goes down to a T. P.

And but that's a whole other world. And I'm sorry I don't need to go down that rabbit hole. You press the button. It's too much. – No, that's a good one.

And we'll kind of maybe well I'll circle back to that as we kinda finish. Now then another thing that's near near and so then as we think about that dis regulation when we think of dis regulation of the immune system then you think is there anything that might regulate the immune system and kind of bring that into balance? And for me one thing that has been probably the most helpful just personally and with friends and family and with patients has been peptides and and so then you know there are a host of things that quote unquote regulate the immune system, stem cells your own stem cells are floating around and they kind of they help regulate and balance your immune system. Yet killer cells, there's another cell. So we have all of these cells that will regulate we have cells in our body that will secrete peptides which are small proteins that can have a regulating effect on the body.

We have molecules that we ozone therapy has a regulating effect on immune system. And so we have this whole diversity of different things that regulate the immune system After we calm down the mind with some of the things like we talked about then you say okay what can be done to regulate the immune system and then how does that do with these sort of three different categories we talked about and I have found peptides to be fairly helpful broadly. There are on the peptide front there's some immune peptides and they tend to come from your thymus gland and there are several categories. Time Mulan is a new one that's kind of come onto the scene. It's the it's a fragment of thymosin alpha one and we'll have some immune regulating benefits and and we we certainly enjoyed using that because thymosin alpha one basically has gone away as a as a peptide just for regulatory reasons in north America.

But time is gonna be an interesting one. People will use some of the fragments of thymosin beta four, especially TB 500 which is the 17 to 23 fragment of thymosin beta four. So those are 22 interesting ones.

Your doctor can work with the compounding pharmacy and then send those to you and then people will do maybe

500 micrograms, maybe one mg a day and then sometimes that will be just enough to regulate and kind of harmonize the immune system to some extent.

They also can be helpful in terms of fighting infections and so they can they can they'll have immune supportive as well as immune regulating. And so whether somebody is actually dealing with an active infection or an immune system that's just out of control responding to some some particles or peptides that are left over from the an infection.

And so then that's been an interesting category. I think you've had some good results with peptides as well. – Yeah, no we love peptides. I mean I think it was that's one of the things that I think we are working with you, we realized how important it was Dr. Parkey has become enamored of them and just had seen such amazing results when you use them. And I think and it makes perfect sense because these peptides are breakdown products of the larger proteins that are released in initially with injury or with infection and then as the body is healing, it breaks, it kind of snips those bigger proteins into pieces and those are designed to signal us that the battle is over and that we can begin to heal and sometimes we just need a little bit more of that, the battle is over, we can begin to heal signal.

And I think that's what a lot of the peptides are doing. And so I love them, our patients more importantly. – Yeah, I know our patients do as well. And so then that is a and so as we're moving through and this is a good one because as we're moving through diagnostically what's happening, the the it's useful to be able to do something that's helpful at that time and you know the the there are some very big expensive ways to regulate the immune system stem cells and stuff like that.

But peptides are really low cost, easy to do and then they're a daily intervention that people can do. And so then as a 1.0 a lot of times what we'll try to do is check in, see what try to diagnostically sort out what's happening.

And then often often we'll we'll do a couple of month course of peptides. Sometimes it's shockingly helpful, sometimes it's not too helpful at all. And and then, you know, we're continuing to work our way through a diagnostic algorithm and sort of figure out what's happening and then we work on some bigger things.

You know, one thing that has been a fairly interesting intervention for us has been plasmapheresis which is a A technique where we run blood through a plasma separator and can pull plasma off of the body are our blood is about 50% red red blood cells and white blood cells and about 50% plasma.

So, imagine we've got five liters of blood in our body and we got about 2.5 liters of plasma, a little bit more. And so then what we will do is we will pull some of that off and then kind of like the stellar ganglion block is a re reboot of the central nervous system from a blood flow perspective, I think of plasmapheresis is a little bit of a reboot of the vascular immune system and particularly the immune system is in the vascular tree because we're pulling some of that off.

We like to do we do a version of it where we do a micro dose of ozone and so we but we'll do plasmapheresis where we only pull off about a leader or a leader and a half. So it's a smaller plasmapheresis than the traditional therapeutic plasma exchange.

Plasmapheresis, Microclots, and Treatment Strategies

But we're able to do it with various with smaller I. V. S. And we don't have to put a 17 gauge needle in. And so you know there's but we also do the traditional plasmapheresis and we've had I've had some people will will be almost night and day in terms of a response after that. And so then and I think part of that is from an ozone is going to be regulating the immune system a little bit and then a lot of that is just from the effect of plasmapheresis.

And then when we do that we're combining that with vitamin C. And glutathione and antioxidants and some cars sittin and so a fairly balanced ivy. And so then as a strategy a lot of times mental emotional spiritual try some peptides and with that in mind understand that a lot of times they I'm trying to do low cost simple Most effective lowest intensity stuff 1st.

And so and see how that goes. So try some peptides. And I think as we as we evolve I think people you know from a at a societal level that makes a lot of sense because we don't want to do a $10,000 treatment as our 1.0 for long covid. I'd like to do some $200 treatments.

See how that goes, gather a little bit of data and try to figure out what's going on. And those can be helpful. But then the entire spectrum of I. V. Therapy and then even remember just getting a Meyers cocktail and some glutathione can be very helpful for some people feeling better.

A little antioxidant support and you will have some people come in and we'll just do some real simple stuff like that. And I've seen that really shift the needle for some people.

– Yeah but there's two things I want to remind people number one is that we were talking earlier and all the therapies have been talked about in our other episodes.

You know there are things that Dr. Cook explorers and does. But I figured we were concentrating today on what I think are more some of the cutting edge things that he and we do that not many other people do.

You know and especially on the ganglion block which I think is just a brilliant reset that we will send people to Dr. Cook for And the plaster of Paris is which is again is I agree is an end stage is sort of the last step because of the expense of it.

But by very but by removing the antibodies I think because this is the great question is how much of a problem are persistent antibodies and Dr. Mobeen people actually Dr. people know him as Dr. Been, he has a podcast and one of his he really believes strongly is something that not many people talk about. Is that there are anti idiot type or basically you make antibodies against the antibodies that you made against the spike protein which is a little confusing but anyway but the fact that these other antibodies that you do to kind of rid your body of the antibodies that you made to protect you.

Okay you make antibodies to get rid of them and those sometimes combined to the same ace two receptors throughout your body and cause problems. And so by getting and I think that's where probably the plasmapheresis might be a very special. What we're looking forward to is the day which hopefully will come before the end of 2023 that we actually have testing that can help us identify who has the micro clots you know who has who has the persistent spike protein, who has perhaps these these these particular types of antibodies I mean that is the future.

Unfortunately. I'm hoping that the government is now spending enough money and there's enough smart science. There's a lot of really smart scientists out there. I'm gonna be talking to some of them who will be able to give us so doctors like Dr. Cook and I and we can we can actually aim the treatments better and and be more be more effective without having to incur costs that are just too much for many people. That's one of the great tragedies of these chronic illnesses.

– That's the appealing thing. That if you imagine that I've got half of my blood, you know, this, this red cells, red blood cells, white blood cells and the other half is the plasma.

All of the antibodies live in that plasma. And so then for for certain autoimmune conditions that where there's antibodies and we're really trying we need to get those antibodies out of the body, we do this thing this plasmapheresis where we pull a bunch of plasma off and when we pull that plasma off, we're pulling antibodies off. Well, if we can pull a bunch of those antibodies off, that kind of clears the deck a little bit.

It's kind of like cleaning up the white board and then now our immune system gets a new take a fresh take on on what's happening and then often you find oh guess what the war is over and you know, so and kind of interesting.

– Yeah, Well that's what we're hoping that's how we hope you know how this plasmapheresis is going to make a difference. I mean that's and it's exciting.

I've spoken to a few other doctors. There's not very many people doing it in America for covid but I think all of us

who are doing it have been impressed by the results.

And – My favorite experience of my last that I can remember. I got to meet Isaac Eliaz. – Good. Yes. So that the Dr. Eliaz is doing the help plasma help a Paris is a little a slightly different take on it but slightly – Different take on it.

But so then and so then you realize we're gonna have a diversity of different approaches and strategies of of and then and then we'll be again to start to get some data around that of of if you said of of all the people that you've talked to what are the most appealing, what are the top three most appealing treatments that you put in your mind for a long covid. – Wow. You know it's really pretty varied. You know I think it depends on people's experience because and that's why I urge people not to give up because there is a subset of people who respond to you know what I we have the F.

L. C. C. Camp. Which is you know the ivory mactan and you know lowering inflammation lots of herbs and good things to lower inflammation. And they're beginning to use more of the treating blood clots you know micro clots and then you have the micro cloth group who really think the whole problem is the persistence of of of despite protein causing abnormal form of vibrant which doesn't get broken down by the normally. And so you have these persistent micro clots and they feel you know so they just you know use anticoagulants.

And then you have the doctor Bruce Patterson group who used more of a rock and statins and play with stabilizers. So you know and so each one of those as I talk across across the groups they all see their own successes and failures. And what I'm looking to do is to let patients know that don't give up.

And this is a little bit this is just like we have we see with chronic with with the people who have been chronically ill before Covid. You know some people went to went to people who are experts in line and some people went to experts in mold and some people went to experts and mast cells and some people went to experts in viral things and some people went to experts in parasites and you know doctors like like you and me and the people we work with realize that it can be all of those or any of them in different combinations.

And that's what I'm trying to get to the world when it comes to treating long Covid we're in the same ballpark. This is an illness that's about the individual in front of you biochemistry and genetics and this is the trigger.

The trigger might be the same. But we're shooting in one person at 22. I mean these violent things. But anyway, you know, we're very different responses depending on the person.

And that's what makes it hard for the patient until we get really good testing because then they're stuck having to like cope that they say the right words to us that we can prioritize their treatment. You know, – I love that and you know, all of those modalities I would be supportive of.

And then I've seen people get all of those modalities and do well. – Yeah, exactly. Because they all work sometimes. – They all work sometimes. And so then they're all and this is a if you said, you know, if you had this, the simplest problem in the world is going to have a relatively simple solution.

This is not the simplest problem in the world that it's multifactorial. And so then it may be that there's a person with micro plots that needs some something that is going to help in clotting now. That could be, you know, they it could be, they could take nana keenness, they could take Baluch, they could take an anti platelet medication they could take aspirin now and I could I could say 15 other things lumbar.

So then all of all of those things are gonna be helpful. It turns out ozone will when you give ozone you give half brown and so you get that benefit. But ozone also improves viscosity and improves blood flow and and blood vessels. And so then all of those things.

And so then you've got this huge diversity of things just on a let's say micro clot perspective. And then yet if there's something else going on and then we don't address that that person might take all of those things and then they may not get better. And then we think, oh the micro the micro clot medication that I took didn't work. It may work.

It just may be that we missed something else diagnostically that was going on. That's why we started out with the diagnostic. And it's humbling as we think about it because I feel like together really. There's nobody that we haven't talked to in terms of like at least like Bruce Patterson. I think the world of them, everybody, everybody in this conversation I think is doing a great job and it's a nuanced thing. But in my mind again and again and again, I come back to multimodal therapy.

– Absolutely mad. It's and you know, as we're talking when I when I what breaks just really upsets me is that there are relatively so few of us out there and people are going to the the Centers of excellence for long covid and basically, you know, they're being given excellent medical care but they're not being treated, you know, they're being given, you know, cognitive behavioral therapy. Once again, pots of their autonomic stuff is being treated because finally, you know, enough cardiologists are aware of, you know, autonomic dysfunction and actually recognized and treated.

But that's about it. – Okay, I got a good one. And so then that so then you taught me this and this was like this and I always quoted you on this and so was the great because you know, when I'm young anesthesiologist that doesn't know too much and I'm out here doing this stuff and then you taught me about pots, which is postural Ortho static hypertension, which is if I stand up, I'm gonna squeeze my blood vessels a little bit to maintain blood flow to my brain so that I've kind of steady blood flow. We all do this all the time.

And so this is our autonomic or autonomic or automatic nervous system that does that. And then what you taught me a long time ago was, oh, if somebody has that, they probably either have mold or Lyme and and then I have never seen anybody that has a significant case of pots that doesn't have some kind of infection, co infection could be obscene bar could be mold or Lyme something in that spectrum.

Now we're releasing a lot of people with long covid present with that. And then also present with mast cell activation. I remember remember when we were at the lecture, when they first introduced mass cell activation like five or six years ago.

So then you say as now to go a little bit deeper. Well let's say somebody has that, what are some modalities that we can use to treat that because those are like actual symptoms that can drive people crazy.

And interestingly when you have that pot a lot of times you'll stand up and get Dizzy, but then a lot of times you can get a little bit of attack of cardia.

So your heart rate will go up as a response. And then often people can get panic attacks and often people can get some um emotional stuff that come up just as a physiological response to having your heart rate go to 120.

So then 11 thing that I have found and we found this for a long time is that this vitamin N. A. D, which is a derivative of vitamin B. Three and has some mitochondrial benefits. And it's basically, and it's like a little battery or it's like currency in the body and it can donate an electron and facilitate a high energy reaction and you can do that in your Krebs cycle that makes energy in your cells. They can do it in detox pathways.

We've seen that can be fairly helpful. And so it used to be that somebody would listen to a talk like this and they would say well how do you get it? And you say oh where you gonna go? And they're going to put an I.

V. And then they're gonna drip it in over eight hours. And that was kind of in the addiction world. Now we get any D. From a compounding pharmacy and then we put some fluid in the bottle and then we mix it up and then we draw up an insulin syringe and then people can give themselves any d subcutaneous lee that can it has some immune stimulating benefits. And then it also has has some mitochondrial benefits. And I've I would say it's probably been my one of my better support of things that I give people with pots that will help them get better. I gotta be careful.

And you taught me this also start low give them real low dose ng. And so then instead of giving like uh 500 mg in N. I. V. We give 100 mg slowly. Instead of giving 100 mg in a shot will start at like 10 or 20 and kind of slowly work our way up. That has been a real helpful Modahl for us has that have you have you found any D to be helpful in the long covid world.

POTS, NAD, and Closing Thoughts

– I really haven't used it a lot in the long covid world, you know and N. A. D. Is something that we go in and out of. I because I said there are some it's just something about my patient population is that I don't get the response because I know almost everyone I talk to gets like your like your experience phenomenal responses to N. A. D. And um I think God is just playing with me, you know, it's always say like some things just work for you.

But I just like the idea but the N. A. D. Sub Q. At the low doses. I think that's a great thing because it's a way for people to find out inexpensively if it's gonna move the needle for that, you know? – And the the thing is is that N. A.

D. Has this huge diversity turns on. It can help with DNA repair, it can help with detox, it can help with some immune stimulation. It has these mitochondrial benefits.

What I learned from you early on is in that narrow subset of people with relatively catastrophic complex illness In that population. If you give them 100 or 200 mg, it can really overwhelm them. And I think it may be that it triggers detox pathways in that population that become a little bit overwhelming.

And whereas somebody that basically has a much more mild case all they don't have too much detox going on then they can take a relatively big dose of any D and it doesn't bug them. So then that's where the low cost N. A. D. And these these real micro dozing and so I started you know basically we mix it up so that 50 units and an insulin syringes 100 mg. And so then we make it so we give people 10 a 10 mg doses like this real baby dose and then they kind of get used to that and then they work their way up and – I love it. I love it but we probably have to wrap up we can talk all night and keep because you know I mean this is what the fun thing of sharing and that's what yeah that's what you know medicine used to be like of of sharing of sharing ideas because what people have to understand is that the things we're talking about are safe in the sense that you know logos any isn't going to the worst they'll do is cause some transient nausea you know it's not going to hurt anyone and that's what medicine has devolved is that because so many of the pharmaceuticals that that can be used will actually have you know significant negative effects if they're used in the wrong person we've made a very high bar to trying things and that's why those long Covid centers aren't doing much because they're waiting for the you know 5 to $100 million study to show that X actually does more harm than good while we can't do that because it takes too many years and especially for things that cannot be patented, then nobody's gonna do those studies. So using micro doses of N.

A. D. Are not going to be studied you know ever. So we have to share amongst ourselves and learn from each other and then go out there and offer these opportunities to people and just hope that you know the powers that be realized. There's a difference between giving harmful substances in large quantities and using micro doses of nutrients.

So on that somewhat paranoid and hopeful note cause you know I mean it's just we've both been doing this long enough and we just see that so many people do get well and we have to keep getting out there and being able to offer these things to allow allow that and not be consigned to the you know PROzac and come back in six months when you're not any better and I'll change the antidepressant.

– Yeah. And you know, even those a lot of those Covid clinics they're finding you know some good. So I've read some great articles. So they're finding you know just a lot of brick and mortar normal stuff because people haven't been going to the doctor either. And so they're finding a lot of stuff that is not covid and but then I think that as we go what's gonna happen is we are going to build a vocabulary of products from micro nutrients, the supplements to regenerative medicine, to injections that reset to drugs ketamine and that the and we're gonna have a vocabulary of how to regulate the central nervous system, the immune system and then the gut.

And then as we do that we will bring balance to the body. And as that happens then people will most likely begin to feel better and then and then help their body will begin to regulate itself.

– I on that note I just fully that's that's the prayer and that's what we see when it works and we're gonna keep doing it. Thank you. – Thank you. – Thank you Matt thank you thank you.

And everyone they know where to find you its Dr. Matt Cook bioreset – bioresetmedical.com – Okay