Michael Roessle...: We are live. Hey, everyone. Thanks for joining for another in this wellness optimization series I started when the whole COVID-19 kicked off. Just trying to bring you as much as great information around this situation as we can. Today is a really special video. I am joined by Dr. Miriam Rahav. Dr. Rahav, thank you so much for doing this.

Miriam Rahav: Thank you so much for doing the work that you do every day and being who you are, a truth seeker and a health warrior and a health rebel. I'm so honored and delighted to be on your show today.

Michael Roessle...: Thank you. I've been seeing... You made a post on Facebook that was sharing some of your clinical experiences. She has a clinic in Manhattan in New York City and is treating COVID-19 patients. But before we go there, you are board certified in internal medicine and hospice and palliative care and you're a certified practitioner through the Institute of Functional Medicine and a certified acupuncturist.

Miriam Rahav: Yes, you got it.

Michael Roessle...: Okay. I just wanted to establish that before we get into the meat of the situation. You are an MD and you are working in your clinic with COVID-19 patients in New York. I'm trying to go... I saw your post and many of aspects of it interested me. One, a bunch of friends who are tagged in your post people who our audience knows. We have a lot of mutual friends. Dr. Maya encouraged me to chat with you too, and she's a good friend of ours here at Rebel Health Tribe.

Miriam Rahav: She's awesome.

Michael Roessle...: The first video of this series was with her and she was talking to people about things they might have in their backyard that they can use. Did you know? If you pine needles, it makes vitamin C tincture and like this. She knows more stuff about plants than anybody I've ever met. Ironically, we've kind of come circle back to New York. If you can share a little bit, we talked off air about your progressive kind of in medicine and opening your own clinic and why you felt the need to do that and what you're kind of seeing in the medicine system as a whole right now around this.

Miriam Rahav: Thank you so much. I had an unorthodox and kind of securitist route into medicine. My first career was actually as a high school English teacher and I studied education while at university. I got a teaching job straight out of university in Tokyo actually, which was an incredible experience. About a year into living in Tokyo, my hair started falling out a lot. I was just a simple young woman teaching English in Tokyo. I went to the pharmacy and switched around my shampoos. About a year about that, I took a little hiatus from my very exciting and very intense work schedule in Japan to fulfill a bucket list wish that I had of learning how to scuba dive.

Miriam Rahav: I wound up in an island in Thailand. I remember seeing this group of particularly beautiful people and beautiful meaning I remember they were glowing. They had this incredible glow about them and they were so happy and they were so upbeat. I figured I had nothing to lose. I also noticed that everyday they were eating papaya with lime juice and nothing else. I kind of stepped up to them and I said, "Oh my gosh, you're so beautiful and

you're glowing and all you're eating is papaya. Do you mind that I dare ask you what's going on?" They told me about this whole story they had involving fasting and detox. That was the first time it really encountered a culture of health seekers and health rebels and health warriors who are trying to take their own health into their own hands and really turned it around.

Miriam Rahav: It was something that terrified me and intrigued me, but the bottom line is I wound up going to this place that they had told me about, which is still on the island Koh Samui in Thailand. The island is completely changed now. This is in the '90s. But that whole fast and using clays and herbs and ... and colon cleansing, which was such a radical idea, completely changed my entire body and my mindset. It also happened to be in a place and time where I watched people use plant medicine and it also happened to be in a place and time where I discovered there was a renaissance, a rekindling of interest in plant medicine and natural healing in Thailand itself.

Miriam Rahav: Because of the Thai AIDS crisis that had really burgeoned into the mid '90s and kind of followed in the lag of what had happened in New York City. All those things happened for me at the same time my own health revolution, which I didn't understand mechanistically, but do now, and also my interest in it and saying to myself, "Let me pursue this in any way possible," which at that time is a person who had astonishingly humanistic background. I was a comparative literature major. I quickly studied Thai reading and writing, and I was able to work for a Thai non-government organization where I was able to support myself through helping them with grant writing.

Miriam Rahav: The real kind of payback other than the stipend that I lived on, which was kind of enough to feed myself, was hanging out with traditional healers and humans living with HIV in the community. I learned about how a grassroots health movement is created out of a real need, out of a real crisis. I think I'm mentioning that a little more than I might usually mention because in some ways I see a parallel to that today that we're in a middle of crisis. I'm roots on the grounds trying to say what's within my arsenal. I love what you said about Maya, like what's within our arsenal? What's in our backyard? What can we do to support ourselves and empower ourselves and kind of face this in the most important and empowered way that we can?

Miriam Rahav: I look for ways, just quickly... I'm sorry. I wish it were a quick answer, so forgive me if I wax long. But after doing that work, I wound up living in Thailand for three years doing kind of different levels of that way, like my own health journey in parallel to studying plant medicine in parallel to being an activist in the Thai grassroots movement in response to the Thai AIDS crisis. I realized also especially because of how indebted I felt to that community of humans living with HIV who taught me how it was that they confronted their own mortality, what were the health issues that play, and how deeply I cared for them.

Miriam Rahav: Of course, many of those were lost. The interest in natural medicine and also that end of life care, because you mentioned that I'm a hospice and palliative care physician, all of those things kind of sprung up really organic for me in the same time and space. I realized that I had to do something. There was a calling. I joined an HIV support group in a rural community in Thailand that was created by a nurse without medication to give people and only a diagnosis. There was the testing, but there was no antiretroviral pharma available to

the community at that time. The answer that she came up with for herself was let's create community... Sorry.

Miriam Rahav: The importance I felt was that I needed to study the science, and I consulted with that community. I said, "I think I need to study medicine," and they said, "Well, you definitely need to study medicine, but you don't need to think. You just need to go. You just need to do this." I felt like I was pushed into... I mean, I willed it, but I also felt pushed into...

Michael Roessle...: Following what was in front of you.

Miriam Rahav: Absolutely. It was just a very organic progression.

Miriam Rahav: So, I think therefore, that vein of how do you treat medicine on a community level, and a grassroots level? How do you pull the resources available to you? How are your boots on the ground? How are you compassionate? How do you meet whatever the cultural, or just temporal, like time and space, and what the challenges are in a moment in time? With how I really cut my teeth, in my initial clinical experience, I think I acquired a lot of clinical experience just before I ever formerly became a clinician. I carried that into my pre-medical studies and into medicine. I wound up studying medicine in a really special school called the Medical School for International Health, which is based in the South of Israel, and really was created just around that time. Around the time I was in Thailand.

Miriam Rahav: I met the charter class in 1998 in a town called Be're Sheva Israel. I visited them because I'd heard about the school and heard about what they were doing and they asked me about I was doing and I actually never applied anywhere else. I went to Columbia, both back pre-medicine and applied to one school alone and went there in 2000. So I was older when I started my medical training and never stopped studying plant medicine, traditional medicine.

Miriam Rahav: And then on top of that in my residency, I discovered functional medicine. I listened to a lecture by Jeffrey Bland, and used my book step in that year to buy the functional medicine textbook. And so all these things have kind of run in parallel and have been really consistent. I never intended to do anything with my medical training, but integrate it with allopathic training. I just wanted all of the science and as much, and I continued to study, so I became a certified acupuncturist only the last two years. So my studying never stops. I think that all of us in the health professions I think that what I signed up for is to be a lifelong learner.

Michael Roessle...: And what you learn now, I've been in some form of natural health nutrition, fitness, wellness, functional medicine for about 10 years and there's been about four full evolutions and information since then. And so the doctors and the practitioners who are not constantly studying and learning in this field become pretty outdated pretty quickly, I've found.

Miriam Rahav: And I mean, there definitely I mean we all need to be re certified. One of my favorite resources on the allopathic side is an excellent all of us in hospitals certainly. But I subscribe to it as a private user, is a site called uptodate.com where leaders in every field are constantly updating and they say that the entire field of medicine turns over, at least when I was in training, they said it turns over completely in 16 years. I wonder if that has actually sped

up in terms of the cycle of what we know and what then becomes common wisdom keeps on changing over. And so I think all of us, and I think also on an institutional level is, is widely acknowledges our need to constantly update our practice.

Michael Roessle...: Well, kudos to you for doing that. Your rapid succession of education makes my head spin. So I also started as a teacher. Funny enough, I taught history, political science and sociology at the high school [crosstalk] for about a year and a half. And then I was like, this is not going to be my career. So but yeah, so I've been there too. So about your clinic, what's your general patient base normally? say pre COVID. Do you have an avatar, like a person who is your average patient or is it kind of across the board? Is there a specialty there or?

Miriam Rahav: Oh yeah. I mean, so I think in general, our community, I like to think of patients as partners in healing because really are, it's a really partnership and I really think of them as community members because they were really kind of changing how care is delivered and kind of what the doctor, patient relationship is to really health partnership. So, forgive me if I lapse into partnership in community [crosstalk] because I'm trying to... But it's just a highly literate community. I don't have a huge kind of PR machine at all. I mean we have a little social media site, we have a little Facebook presence, we have a little Instagram, but mostly it's word of mouth. And so the people who find us tend to be people who are doing research and who are looking for answers.

Miriam Rahav: And usually people are looking for answers because they're asking the same question. And the answers are not necessarily forthcoming. Sometimes people come to me because there have been a lot of doors that have just closed. And we can speak to that a little bit. I think that does play into what's happening with Corona is just that we in the functional medicine space have different tools and are able to apply those tools. And in this, like we're dealing with different infectious entities, especially viral, where I feel like the pharmaceutical tools for viral illness have been more limited.

Miriam Rahav: And that the plant Pharmacopia and the use of basic basically oxidative therapies. In this case what we've been using is high IV vitamin C, but in other countries, especially, Germany has a huge track record for using other oxidative therapies such as ozone or ozone in combination with ultraviolet light is known as Botox therapy with tremendous success in the order of, hundreds of thousands of cases. So I'll put that under a broader category of oxidative therapy is incredibly helpful for viral illness. And that has absolutely been the case with us.

Miriam Rahav: So going back to who our patient or community based partners in healing base is, is people who are literate and critical thinkers and tend to have been suffering from things chronically and have not met with optimal success, therefore continue to look for answers. And so that can be the entire spectrum of auto immunity from anything from multiple sclerosis, to lupus, to ulcerative colitis, to Crohn's disease, to Hashimoto's thyroiditis, is one that's also really common in the population therefore, we commonly see.

Miriam Rahav: Chronic fatigue is one where I think people are looking for answers and find a dearth of answers where we're really working hard, chronic candidiasis, attention deficit, mood disorders, anxiety medically unexplained infertility, weight loss

resistance, migraines. I'm just pulling off the top of my head. A lot of the conditions that we might be addressing in humans who come and find us.

Michael Roessle...: Thank you. And it's probably pretty nice from the practitioner end to have such illiterate base of community coming in that you can, that they know what they're looking for kind of, and you can talk to them relatively easily around.

Miriam Rahav: Oh my goodness. I have to say I love, adore my partners in healing. They are so brave. And this is one of the things I like to say as people come through the door because I know that other doors have closed for them, and yet they're still daring to come through another door and how vulnerable that is and how scary that is. And yet they do it because there's just some spark that says maybe there still is an answer out there and they just don't give up. And it is the most humbling thing to have the privilege of caring with these people. They are incredible human beings. I absolutely adore my community.

Michael Roessle...: That goes a long way towards healing too, I have found is the relationship between the patient and the doctor, or the community aspect. So let's get a little bit into the coronavirus COVID-19 situation. Now, the original mechanism of disease, from my dangerously mildly educated layperson's point of view, is that originally this is a respiratory infection. This gets in the mouth and throat, the lungs, it damages the lungs, causes that opaque glassy distortions on the scans. And then the lungs can't get oxygen and then you suffocate, unless you use [inaudIVle] and let's make the lungs go. That was the original take on it.

Michael Roessle...: And now I've seen tons of science that shows that it's more so internal what's happening and that the virus seems to damage our oxygen carrying capacity and oxygen levels in the blood and the blood itself, which creates a situation that resembles more like altitude sickness or hypoxia, which then in turn could damage in the lungs from the inside. Because if the lungs aren't getting oxygen, they're not going to function properly. But then that's why there's all these unexplained, heart issues, and liver issues, and brain issues, and all these other issues, because lack of oxygen to anything. Is going to cause damage systemically. So is that kind of that, that transition to that paradigm, is that more what you're seeing as far as your impression of the presentation?

Miriam Rahav: So I want to just qualify everything by saying that I'm not a researcher and I'm a clinician who's really based with the point of care. And so I have to speak to what I'm seeing clinically. What I'm seeing clinically, and I'm really careful, I'm also very curious to hear the story because that's kind of the natural history. What happens where someone says, well first I lose that my sense of smell or taste. And so I think that speaks to the colonization of Coronavirus in the nasal passages, right? So we know that we have a relatively asymptomatic incubation phase for a few days and then we start manifesting with symptoms, and those symptoms appear to be upper respiratory, right? So in the sinuses.

Miriam Rahav: So almost like a sinusitis is also generally associated with a lack of smell and taste. So the nose, that upper nasal passages, the sinus frequently sore throat, I'm looking very carefully in everyone's mouth is as is my practice and I'm noticing practically everyone has the back of the throat, the oral pharynx, the posterior or a pharynx is red, what we call erythema and clinical language. But without pus, without the sign of a bacterial infection, just a generalized erythema. And many people, I'll see the tonsils are inflamed.

Although when I'm feeling for lymph nodes kind of externally, not necessarily tender the way you would with a strap. So like a tonsil, then an oral pharyngeal posterior, oral pharyngeal erythema.

Miriam Rahav: And then they'll talk about definitely feeling this malaise. I also want to say that over this period of Corona, my practice has changed profoundly and I've wondered about that. I wonder if my partners in healing generally are doing well and we're not finding that many. Some of them have been infected. Some of the older ones, some of the people who have met me more recently and we've gotten less of kind of the root cause resolution work in. We've definitely had some of our community members affected, but mostly our schedule completely cleared out as people were sheltering in place and were kind of postponing and definitely people's follow up plans and instead a little bit of word of mouth.

Miriam Rahav: And we've had an influx of people who had never been exposed to functional medicine before. People who are really sick, people who are being carried in sometimes by relatives. I had a chapter of my life before Thailand and before Japan, I spent my junior year of college living in South America, and had the pleasure of treating a couple from the Ecuadorian New York community who were very, very sick, one pregnant woman and her husband. And they were very sick. They were very weak and they didn't have medical insurance and they didn't know where to turn. They found me and their health turned around completely in one day and they were so grateful. And then there's been like a steady influx of, and it also speaks to community when you speak about community healing, this incredible word of mouth and the trust of this particular community for example in how they've entrusted themselves to each other.

Miriam Rahav: And there's been an influx of many people every day who are also similarly uninsured and maybe not comfortable and don't know where to turn and are coming in really sick. Some people carried by piggyback. We've also managed to get out into the community a little bit. So we've hit different pockets of communities. There is like the Orthodox community, like certain communities who are tight knit or had like group gatherings though like the Orthodox Jewish community in Brooklyn was heavy hit the South American. I think there's a lot of dialogue out there about different ethnic minorities. We've been more heavy hit. So I think there's lot of nuances to what's happening. And I think a lot of reckoning and a lot that can be said in so many aspects of this. But I'm so delighted to have been able to address the health concerns of the kind of uninsured Hispanic community in New York city specifically.

Miriam Rahav: And whoever else. We've also had some members of the Chinese community find us. I mean, it's just really incredible like the word of mouth and who has managed to find us. And very rapid turnaround. And that rapid turnaround is completely owing to the high dose of IV vitamin C. So I'm talking about 20 grams of IV vitamin C because hospitals now have started to use IV vitamin C I think. And some of the dosing that I've seen, for example, in some of the medical guidelines from medical schools and universities are at lower doses. So 1500 milligrams I think on a four times a day schedule IV. But we're able to use high dose of IV vitamin C, depending on our clinical judgment. And we could talk about what might make us choose lower or higher, anywhere between 10,000 and 20,000 million milligrams of IV vitamin C in a sitting.

Miriam Rahav: And that seems to be doing so much in terms of turning this around. And we've safely used more than that. Some people who are a little more medically literate might raise the question of G6PD deficiency, which is a specific enzyme deficiency common and folks from Mediterranean origin. Where at higher levels of vitamin C, it might lead to a breaking up of the red blood cell because of something called oxidative stress. And when that blood cell breaks up, it's called hemolysis. And if a lot of red cells break off, that's a hemolytic anemia. So that's a concern that people might have at using.

Miriam Rahav: But we find that using 20,000 milligrams of vitamin C is still within a safety margin. We know that in cancer care and alternative cancer care, we can get up to 50,000 milligrams, 70,000 milligrams and even in some occasions 100,000 milligrams in a sitting. But that's something you have to work up towards. And that is absolutely a case where you would need to do G6PD screening before. So we're talking about different scenarios. What we're doing right now with COVID empirically when someone walks through the door safely is up to 20,000 milligrams of Ivy vitamins.

Michael Roessle...: How many, that's a lot. Is that calcium ascorbic? What is the?

Miriam Rahav: Yeah, ascorbic acid. And then we're we're buffering it with sodium bicarbonate and calcium gluconate.

Michael Roessle...: Yeah. I know-

Miriam Rahav: The sources that we have...

Michael Roessle...: We have Dr. Jolene Brighten had to self administer an IV of ascorbic acid unbuffered to herself in Puerto Rico last week and it was not an enjoyable experience. You know Dr. Brighten?

Miriam Rahav: I heard about her. I think she's also doing some work with hydrogen water and using nebulizing hydrogen water for pulmonary symptoms as well.

Michael Roessle...: I believe so, yeah. She's been on oxygen for about a week. She's at home, she's in Puerto Rico. They let her go home to do her own care. But I know that she posted a pretty not enjoyable experience about doing straight IV of ascorbic acid unbuffered. And I'd never even heard of that. But she was desperate to get some vitamin C.

Miriam Rahav: Yeah, that poor sweetheart, my heart is going out to her and her knowing what to do. But not having the facility or the resource [crosstalk 00:24:05].

Michael Roessle...: She got the right stuff now. So got the buffered kind now. Now, how often would you do that?

Miriam Rahav: That's a really great question. So everything that I'm learning is by clinical response. So we're getting people in and we're checking a number of things. We're checking blood pressure, we're checking weight, we're checking height, we're checking oxygen saturation and temperature. Some people are, many people are febrile and they're saturating not normally. So speaking of this mechanism of what's happening at the level of the heme molecule, the dissociation by the Corona virus of iron off the heme molecule, which seems to

be one of the mechanistic explanations that seems to be making sense to me clinically in terms of what people are mentioning.

Miriam Rahav: In terms of progression of symptoms, where they're talking about bone pain, muscle aches, myalgias is another word for muscle aches. And then what we're seeing is that lower oxygen saturation for people to qualify as far as I understand at this moment, and the criteria might be changing in terms of the hospitals. But at least for a period of the past few weeks, I think the criteria to be for hospital admission is oxygen saturation less than 90%. And so we've gotten people, right? So if people are sad saturating, much less than 90%, there obviously should be referred to a hospital setting. Because I do not have ventilators, I do not have the the ability to to give high flow, low flow oxygen or monitor in that continuous monitored setting.

Michael Roessle...: [crosstalk] below 90, and 02 saturation is...

Miriam Rahav: But we've gotten some people, so I have to say, some people don't, if people say, well, I'm no matter what I know I'm not going to the hospital, or they're just hovering around that area. We had last week an older gentleman, 87 years old Chinese with a few other health concerns. A chronic myeloid leukemia and also chronic obstructive pulmonary disease. And so he was actually saturating really low in, in the high seventies, which was very obviously concerning for us. We were asking about what his normal baseline was around 91, 92%. So that's not a normal oxygen saturation for someone without chronic obstructive pulmonary disease. But for someone with chronic COPD that would be acceptable. And so he was clearly in an unacceptable range. And he said that he would not go to a hospital no matter what.

Miriam Rahav: And so he challenged us to do whatever we could for him. And so that was something I wouldn't normally dare do, except he said no matter what. And he had been staying at home and sheltering in place and refusing for two solid weeks until his family members brought him in a wheelchair into our clinic. He could not walk on his own. And we gave him high dose heavy vitamin C. I don't think we... I think we modulated a little bit because we wanted to put some other things in the IV bag. What I could see, and again, this I think speaks to the dissociation of iron from the heme molecule. And then you have basically empty heme molecules running around not delivering oxygen to tissues, is that you then don't have the power in all of your muscles, right. That you'd normally get from oxygen for a robotic metabolism, for oxidative, what we call oxidative phosphorylation and the generation of ATP or energy on a muscular level.

Miriam Rahav: And so you get fatigue, like the same way with altitude sickness, you get muscle weakness and a very important muscle for breathing is the diaphragm. And so it looked to me that he was just incredibly tired out. And so we looked into our arsenal of what else can we put safely into the IV bag. And we have injectable carnitine IV. And carnitine is a fuel that helps shuttle fatty acids and energy into the cell, into the mitochondria to be burned for fuel. And so in his particular case, because he looked so de conditioned and was already living generally at a lower hypoxic state and then clearly, dramatically and extremely exacerbated in the setting of COVID. And by the way, he tested positive. We knew he was positive. He had already.

Miriam Rahav: And, I don't know in terms of test x-ray findings, they didn't say new findings, but I think his normal chest X Ray was already, I haven't visualized the imaging of it myself.I just got the report. Third party from family members and he had documented a high ferritin on laboratory testing. So we had kind of what is considered the hallmarks of, or at least some of the hallmarks of COVID. You mentioned the ground glass opacities, the bilateral ground glass that diffused pulmonary process that's being described for everyone, which seems to be part of this systemic mechanistic damage. Which, makes sense to me that there's something happening here. In terms of an all those rogue iron molecules that are now just associated from the heme are also leading to a tremendous amount of oxidative stress, right?

Miriam Rahav: And that therefore seems to be triggering this inflammatory cascade, this cytokine storm that seems to make the most clinical sense to me because then when we give that high dose vitamin C, it's working on two mechanistic levels. One is that clearly the body's sucking up all that active antioxidant defense, right? So it's calming and quenching inflammation on the one hand. And then if we supersede and quench that empty, that inflammatory response. We then also know that some of that high dose vitamin C, and that's why we have to get to those higher doses where I'm pushing the envelope somewhere between 10,000, 20,000 milligrams in a sitting.

Miriam Rahav: It's actually changing in the cell, around the cell. It's converting to hydrogen peroxide. There's a pathway for that, and that's actually increasing oxygen in the body as well. That vitamin C at higher doses is actually a kind of, I call it like an extended release oxygen delivery system. Anyway, what we had with him was that he came back the next day and he was already saturating in the high 80s. Right? [crosstalk] So from the high 70s to the high 80s.

Michael Roessle...: Without oxygen administered that's...

Miriam Rahav: Without oxygen administration. That is correct.

Michael Roessle...: Wow. That's amazing. The carnitine makes sense too. It's just a different way to get energy into the cell.

Miriam Rahav: Right. And get that diaphragm so that he could do the work of breathing more effectively. His appetite came back, he started eating, he had a little smile on his face. His family was just elated and we were just elated the next day he didn't want another IV. He didn't need it. We just wanted to follow up and make sure that he was progressing and then our plan of care became for him actually on mitochondrial support.

Michael Roessle...: Makes sense. So the high dose vitamin C across the board for COVID patients in your idea is-

Miriam Rahav: Absolutely. Absolutely. [crosstalk] And over and over again, we're seeing it work, that like that turnaround like with him. And I think that's different from what I'm hearing, which is that okay, if you hit it early for people who aren't too sick. And so we were hitting it late, he was at home for three weeks and super sick and just was simply stubborn and refused to go to [crosstalk 00:31:03].

Michael Roessle...: Was he COVID positive or just suspected?

Miriam Rahav: Yes, yes, yes, totally positive.

Michael Roessle...: So you mentioned in Germany and other countries are using IV ozone and IV UV light. Actually, I've been to a clinic here in Northern California that my wife did some 10 pass ozone and then they had that, UV, IV-

Miriam Rahav: Combination.

Michael Roessle...: They showed me the gizmo and the machines with the different lights and I was like, what is this? And they said it's light in the veins. And then unfortunately, the person that I was showing me around the clinic wasn't adequate at explaining what it was doing, but it sounded pretty interesting. So maybe we'll talk again about that. But I wanted to, before we have to go, I've only got about 10 more minutes. I wanted to talk about anything else supplemental to the IV vitamin C that you're seeing with your patients, or that you're using with the COVID patients that might be in addition to the IV vitamin C. And then also so like what else in clinic, or what else can treatment are you seeing have potential positive results? And then what can you leave the audience here with as far as like home supplements or herbs or dietary lifestyle, just things that you think based on your experience might be good ideas for them to consider?

Miriam Rahav: So let me start with that because I think listeners are probably most keenly interested in that. And I put like a little summary of just what I've been doing and what colleagues have been doing. And I put it on my Facebook page. Miriam Rahav, MD is like a kind of shortlist of things. And so we're looking at, things that make a lot of sense for health. So let me start with sleep and circadian rhythm. We know that also melatonin especially, I've been looking at innovative ways of delivering melatonin into the body, for example, which I do not have access to. So I'm not going to really say, but just melatonin is one of those things that seems to be modulating inflammation at the level of the lung and if you happen to be one of those people who can source it and then nebulize it into the lungs. I have not been doing that but I just, the crossover is getting good sleep and it seems to make a lot of sense to supplement with melatonin.

Miriam Rahav: And so there are different preparations for melatonin on the market, anywhere between five milligrams and 20 milligrams, either regular or like the stoma. I'm a fan of like a stoma melatonin because then you get better tissue penetration and better penetration into the central nervous system. Because, melatonin is also antiinflammatory for the central nervous system. I think that the idea there is that this is a one size fits many and it always makes sense to start low and go slow. Some people who have never kind of done this work before. The detox work should not necessarily leap into those higher doses. So maybe think about starting with something low, like a five milligrams at night. If you're already getting great sleep, fine. If you have those blue light, blocking apps, or blue light blocking glasses, then you can start with that in the evening trying to power down your devices.

Miriam Rahav: Try to go on a little bit of like a media, or no, I mean, I think there's wonderful media, but like maybe a news diet a little bit. So alarm is trying not to spike your cortisol [crosstalk]

Michael Roessle...: Three hours of things about coronavirus right before you try to go to sleep.

Miriam Rahav: Exactly.

Michael Roessle...: Listen to this interview in the daytime.

Miriam Rahav: Yeah, listen to... Well, this is interview [crosstalk] empowering. But that's why I'm saying like, there's also this incredible positive and grassroots, effect of the media that you're creating. So kudos to you. I mean, you're a hero, as I'm concerned.

Michael Roessle...: Thank you.

Miriam Rahav: So, yeah. So we spoke about melatonin. We spoke about powering down your devices, getting a good night's sleep, which is also restorative to your adrenals. So those are really key concepts that I don't want to neglect. Diet, so we know that there is a huge role to corsitine antiviral and natural food sources are apples and onions.

Miriam Rahav: So if you're a fan of French onion soup and you want to start sautéing tons of onions right now, it might not be a bad idea to go ahead and do that. And some people with IVS don't tolerate apples, that stewed apples or apple sauces might be more tolerable. So I'm not telling this as not a one size fits all. This is me trying to figure out what could work for many. So don't take this as gospel. This is like we have to always. And what we're doing in our clinic is always like tailoring things to the individual, right? But getting our fruits and vegetables for all the flavonoids, which to speak about, a total of maybe 10 servings a day. So five to seven of veggies, two to three of fruits. We know that the flavonoids and all those fruits reduce inflammation.

Miriam Rahav: And we're looking at specifically if we want to get super geeky about it, the NLRP three inflammasome signaling, and downregulating NF Kappa B, TNF alpha, interleukin six, interleukin 1B and interleukin 18 expressions specifically seem to be associated with us. I mentioned the corsitine tomatoes, oranges, nuts and berries. Camomile, parsley and celery for the apigenin, that is, hopefully I'm saying that right. Who knows? apigenin, apigenin who knows? Tomatoes, tomato, and curcumin, which we know for the curcuminoids that are anti inflammatory. Zinc, is another major one that seems to inhibit a viral. The coronavirus seems to be susceptible to the inhibitory effects of zinc. And so, we want to get somewhere between 15 milligrams a day IV into your regimen. I frequently use a multi-mineral because then you can get iodine, which is another key one.

Miriam Rahav: Selenium, which is another key one that also is a co factor in making glutathione, which is our body's chief antioxidant. Remember people with Corona are under a lot of oxidative stress. But guess what? So are all of us, so we're all of us in terms of our daily living. So this might be just an opportunity for you to step up your health regimen. Just a quick word about zinc some people have said, I think I'm allergic to it. I don't tolerate every time I take I have a terrible tummy ache. So minerals are very rough on the stomach. Minerals need

to be taken with food and if you take them with food, you probably won't have that reaction. Again, lots of supplements for zinc are available in 15 milligrams. So you start with 15 with food, if you tolerate it, maybe do that twice a day.

Miriam Rahav: If you tolerate that, maybe push the envelope and go to 30. but so I'm just giving kind of general guidelines here. Vitamin C we're talking about in IV. I heard the amazing doctors, Brownstein and dr Ang. If you can't get to a clinic and a facility, because people are calling me and saying, where in my community can I find IV vitamin C? And then looking, and I'll try to do that research and my team will try to do that research for you. But what they're saying is try to get 1,000 milligrams of zinc into you every 30 to 60 minutes. If you think you're actively infected.

Michael Roessle...: You mean vitamin C not zinc?

Miriam Rahav: What?

Michael Roessle...: Vitamin C, that's not zinc, you said zinc.

Miriam Rahav: [crosstalk] Oh no, I'm sorry I misspelled. I moved on to vitamin C from zinc. Sorry, sorry.

Michael Roessle...: [crosstalk] we are all good. I just wanted to catch that because I heard it and that would be a lot of zinc.

Miriam Rahav: No, no, no, no. So yes, that's correct. So I moved, I thought I moved on from zinc to vitamin C and then I probably [crosstalk] out of my clear enthusiasm and excitement on the subject. So, vitamin C, 1,000 milligrams every 30 to 60 minutes if you're actively infected until it causes diarrhea and as the diarrhea dies down, you can start it up again. What I've seen in the literature is that if you don't get that critical amount of vitamin C, again, you might have a resolution of symptoms and then symptoms might kick up again. I think we're really zapping it with the hidrosis that we're getting to IV. But if you're at home and doing it orally, it definitely has a different, kind of absorption like what we call pharmacodynamics.

Michael Roessle...: Can that be ascorbic acid, would that be your recommended?

Miriam Rahav: Yeah. Lots of preparations. Yup. Lots of preparations in the market. So you can see estro C or you can see vitamin C ascorbic acid, but it's ascorbic acid that is mechanistically doing this work. so it could be a fancy one and not fancy one vitamin C crystals, people are getting in emergency.

Michael Roessle...: and your tolerance when you're sick goes up. So like a lot of times people with like ascorbic acid, if you take 500 milligrams of ascorbic acid, that might be over your bowel tolerance in a non-infected [crosstalk] And so saying, taking 1,000 milligrams every 30 to 60 minutes sounds like an absurd amount of vitamin C, but when you're sick and then have an active infection and there's all these things going on, your bowel tolerance will radically increase the vitamin C. Correct?

Miriam Rahav: That's it. That's a really, really good point. And I actually, because I'm doing the IV here, I'm actually not experimenting with those mega doses squarely. And so I

think I'm going to learn that from you. [crosstalk] And I love that they'll have to put that to the test if people approach me.

Michael Roessle...: [crosstalk] Used versus it's not being used. So when it's not being used and you just pound it's, the body's going to be like, no, I don't need this.

Miriam Rahav: Right, exactly. So it's like the body's need, it's not looking to chew it up and it's going to use it. That's similar also to magnesium that in times of stress we just need more magnesium. And so that makes perfect clinical sense to me. So thank you for that point. I love it. What I'm saying for people who are just well and trying to work on the preventative side is the standard dosing. We're trying to get to 2,000 milligrams total daily consumption of vitamin C, usually in divided doses, most preparations that I see at least in tablet or capsular form are around 500 milligrams, sometimes when 1,000 milligrams. So depending on the size of the tablet or the capsule that you have or whatever product you have, just trying to pulse those doses and get to anywhere between 2,000 and 3,000 milligrams a day. But that higher dose thing that I'm quoting Dr. Brown and Dr. Ag. Okay.

Miriam Rahav: So this is not what I'm doing because I haven't needed to. But it seems that they're doing that 1,000 milligrams every 30 to 60 minutes to bowel tolerance, which I view and interestingly noted might increase. So you might be able to do that quite a lot before you actually cause yourself to have diarrhea. But you keep on going until you actually cause diarrhea in yourself. Then you slow down and then if you start feeling bad again, this just bring it right back up. So there's a lot to say about vitamin C. what we know there is that it's also, inhibiting that NLRP3 inflammasome activation and shortens the frequency duration severity of the common cold and incidents of pneumonia. Maybe in general, specifically we spoke about the oxidative stress that might be caused by these rogue iron, floating around in the body as one mechanistic explanation of why vitamin C is so critical right now.

Miriam Rahav: In this, COVID-19 entity that we are seeing and addressing. I mentioned melatonin dosing, like the stoma, but basically starting low, going slow. I mentioned corsitine either food-based but also as a supplement 500 milligrams twice a day. Andrographis, that within onset of symptoms it's antiviral. It also seems, at least from some of what I've heard is that it's a king of bitters. It's incredibly bitter and stimulates bile flow and that some of the surfactant that is what's working on the level of the LVO lifts the functional unit of the lung, is actually, it contains bile salts as part of... So where it's stimulating bile seems to be important and that's something that I need to study a little more, but I'm just going to put that out there as to why-

Michael Roessle...: I've seen andrographis top of the line. In a lot of [inaudible] that I'm researching in [crosstalk 00:42:28]. Probably the most common of all herbs to show up in the things I've been reading.

Miriam Rahav: Right, exactly. Exactly. So I'm just going to speak to that when I'm trying to start that with an onset of symptoms and take for about a week and we're trying to get, anywhere between, 200 milligrams to 4,000 milligrams. I'm landing somewhere in the 1,000 milligrams that I'm recommending and I'm using that in a mixture. There's one that's been really popular called immuno mud, that we've been using, which also I think folks with auto-immunity are asking if that's a safe one to use. And we find that, that product has been helpful with a

bunch of vitamin A and some curcumin in there. Let's see, boswellia is another one that if you have symptoms, it's anti-inflammatory and working on the level of the flammasome and it's like, leukotriene inhibitors. So we're using that.

Miriam Rahav: And there's a nice product by, I think it's called natural health products that's combining Andrographis and boswellia and it's called inflammaway. So that's another product that I've pointed people towards, which we've been liking. Licorice combination formulas, short term is fine. One of the questions is, well, what about blood pressure, if I have hypertension. So, I see a nice herbal product, called viramin or exviramin by apex energetics that has medicinal mushrooms and CDN, zinc and some licorice in there. So that's another nice one that people can pick up. But I really like what Dr. Maya, she tweet said about, using what you have, using what you have at home. And so giving ideas for what you have in your pantry, be it a ginger garlic, turmeric thyme, rosemary, like bringing all of those corsitine. Bringing to bear all of the plant medicines that you have at home and inspiring this as a time to just take really good care of your health, get a good night's sleep.

Miriam Rahav: And then of course, vitamin C and zinc, a multi-mineral if you have it with those other key co factors. Especially iodine is one that Dr. Brownstein has raised our level of awareness, not in mega doses, right? Just, most of us are just low. Or hey, if you have snacking seaweed around or you feel like [crosstalk 00:44:46].

Michael Roessle...: I love those little seaweed.

Miriam Rahav: Yeah, I love them too. So like sea vegetables, right? So not everything has to be about supplementation, but just raising the bar of awareness on our nutritional status and high quality. And also avoiding sugar, avoiding refined sugar because that is inhibitory of the immune system. I'm finding some of my folks that are having a harder time. It's also because they have a higher kind of toxic loader allostatic fluid. So I see some of the people coming in who clearly have the clinical signs and symptoms of metabolic syndrome, hypertension, lots of amalgam in their teeth.

Miriam Rahav: Those are the people who are struggling more with Corona virus. There's clearly an inverse relationship between toxicity, toxic load that you carry in the body, whatever that means. I mean, that's a harder concept to bridge the allopathic health space where it's not yet spoken to attach to quite as much. But those are people who seem to be more symptomatic. And those are people who have called back and said, I was better, but then I'm not so much better again. And so there, I'm also trying to address liver health. I'm trying to use the concept of binders, which are substances such as zeolite, such as activated charcoal, such as bentonite clay, such as, chlorella, such as modified citrus pectin.

Miriam Rahav: And take that away from food usually, just a little bit before bed to help mop up some of those environmental toxins which might be suppressing the immune system and using little taurine or glycine to support liver health. We're also using taurine I forgot to mention that in the IVs to support them quite a bit. And glutathione and the IVs quite a bit to support liver health. So hopefully that gives you kind of a nice rounded picture of the tools that you can use [crosstalk] supplementally at home. And I also posted that like, that neat little summary on, my Miriam, Rahav, MD, Facebook for everyone.

Michael Roessle...: I will link that. I'll link the Facebook right below where we post this video. We get these transcribed, so that people can read them because some people prefer to read than watch. And I'll put a link, so that was the last thing I was going to ask you. I'll put a link to your Facebook page and I'll put a link to your clinic, website.

Miriam Rahav: Fantastic.

Michael Roessle...: And people can reach out there. If you're in New York. It's great. I already browsed it and looked through and what you've created there is really special and has been so encouraging. The last I'd say five years or so to see so many clinics like that pop up around the country. Where there are multiple practitioners working together, focused on their specialty and their strengths, collaborating on complex patients in a way including mind, body medicine and energy and all of that stuff.

Michael Roessle...: Being really acknowledged by people with a conventional medicine background or an MD, background that are opening up to all of these other healing modalities and possibilities and what can get overwhelming. And I can speak on experience of this with my wife's condition. Everything we've been through is that, I know that person that does that thing and that person who does that thing, and that person that does that thing and those are all awesome, but they don't work with them, who don't work with them, who don't work with them.

Michael Roessle...: And then I'm left to try to manage the pieces between all the care aspects and I can handle that. I kind of have enough background to where I understand how a lot of them work together and I can be the go between and whatever, but not everybody has that person that can do that for them. Or they can't, or they're sick and they're tired and they're overwhelmed and to have a lot of that under one roof, like a one stop walk in and here's all these options and really evaluating each individual as a person instead of being like, Oh you came in the door so you get, you get this treatment. It's refreshing to see.

Miriam Rahav: Thank you so much. I think that you really speak so beautifully to the user experience of looking for answers and trying to integrate all of them yourself and how overwhelming and it can be absolutely frightening because you don't know if... And also all of us fundamentally want to be good patients, right? So we want our doctors to care about us and not be alienated and we don't want to create conflicts. We're trying to live in harmony and we're trying to really rely on professionals to guide us through. And so we really did try to create, a little bit of a prototype to see, how we could do this and how we can collaborate as a team. And there are like a growing number of, and maybe it's still continuing growing number of clinics or who are with us, in doing this. And thank you for your words. I just can't tell you how deeply I appreciate your validation recognition, acknowledgement.

Michael Roessle...: No, it's great. It's so needed, like it's so needed and it's the outcomes that patients get in situations like that are so much superior to the trying to piece everything together and figure it out on their own or, one approach. And so in the community involvement and even the language you're using around your community, partners in healing, the words matter. And so you've been trained by enough traditional healers, you know that, that the words matter and the energy matters. And, it's really great. And I'd love to chat with you more

about more topics in the future. This is great. And I know you have a wealth of other information and knowledge too. So let's keep in touch and let's do some more videos.

Miriam Rahav: I would love that. It would be my greatest honor and pleasure.

Michael Roessle...: Yeah, it'd be so fun. And I don't know about you guys watching, but I took quite a bit of notes in my disorganized note fashion, so I think there's a lot here for you to digest. So, thank you so much and we will include links for people to find your work and your clinic and everything.

Miriam Rahav: Thank you so much. And I'll include of course links back to show and all of my social media so people can benefit from the life changing and game changing work that you're doing of bringing all these voices, onto your platform and becoming the change you want to see. And I think very much walking the path such as I was telling in my original story, of kind of trying to look for the answers myself, the path of wounded healers, all of us, I guess is another way you could summarize it.

Michael Roessle...: That is accurate. So thank you for your kind words too, and thanks for all the work you're doing with the patients in New York and on the ground there. It's a rough situation and the more people that can be there helping.

Miriam Rahav: Thank you so much.

Michael Roessle...: We'll talk soon.

Miriam Rahav: Yes. I look forward to it as well.

Michael Roessle...: Me too, have a good-

Miriam Rahav: so much love and blessings to you and your family.

Michael Roessle...: You too. Thank you.