SIBO SOS® Live Q&A with Kiran Krishnan on CoVID19

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Shivan Sarna: Hi everybody. Shivan Sarna here. Welcome to the SIBO SOS® special edition with Kiran Krishnan who is the microbiologist and the brains and the beauty behind MicrobiomeLabs. And the most famous star product there is Megaspore.

And this is a gentleman—I'll talk about you like you're not here in your robe for a second, Kiran. This is a gentleman who has been so incredibly kind, generous and supportive of this community that—I'm very emotional these days anyway. But I'm almost brought to tears with gratitude because of his heart, his soul and his actions. It's great to have good ideas. But when you put them into action, that's when I really get really lit up.

So, thank you very much for your kindness and your work, Kiran. I know you're helping to heal people's microbiomes all over the globe, and then teach the teachers and the trainers and the doctors so that they can then help. It's a beautiful, beautiful thing.

Okay! We have a lot to do today. We have some questions.

And Kiran, can you share with us from your perspective what is going on with the global health perspective? And nice robe by the way!

Kiran Krishnan: Yeah. I do want to mention that because I'm wearing a robe for this interview to underscore the importance of staying home and staying relaxed.

Of course, a lot of people have to be out for work and all that. We understand that. But if you can, you should stay at home and stay put and stay relaxed as well! We want to be a little bit anxious about this. We want to be alert about this. But we don't want to panic. Remember, panic works against the prefrontal cortex, the executive part of the brain. It negates smart decision-making. It makes you do things crazy like

buying two years' worth of toilet paper. So instead, let's get good information, accurate information, and really understand this, so we know what our role is.

And I can't say this with more emphasis, every single one of us plays a very important role in this. **We are the reservoirs of this virus**, right?

Here we have a pathogen that's pandemic, meaning it's spread across numerous countries. It's clearly growing in scale in most countries that it's in—with the exception of China and Korea. And I think Japan as well. They are starting to what they call, *bend that curve*. And in fact, China has gotten it down to where there's very few new cases if any. So they're making progress there.

But for the most part, like in the US, I think we're doubling almost every two days. And that's a big problem because although this is not a particularly deadly virus, like the original SARS or MRSA or ebola, it is an incredibly contagious virus. So it's very infectious. It can spread quite widely. It can spread like the flu spreads or even more than the flu spreads. And the problem with that is the numbers just don't work.

In a 5- or 6-month period, in the US, we can have 40 million people infected with the flu because we don't put anything in place to contain it. And for the flu, for the most part, we don't need to because the mortality rate is really low. The hospitalization rate is also low as well. But this particular virus is as, if not more, contagious than the flu with a 10 times higher mortality rate and five or six times higher hospitalization rate. **So, it just breaks the system**. That's the big problem we're having here.

And we'll talk about some silver linings, but it's a serious situation. We don't need to be panicked, but we need to be paying attention. And every single person plays a role in this.

Shivan Sarna: And we have some general questions like what is the best disinfectant for it? How long does the disinfectant have to work to complete its killing? That's just very practical… hand-washing. What else can we do on a daily basis?

Kiran Krishnan: Yeah! So, of course, the things that the CDC has been saying all this time, hand washing—of course, the twenty second rule with hand washing [count to twenty while washing with soap and water], using adequate amounts of soaps, that scrubbing. Soaps really kill this virus really well because it is something called an *envelope virus*. I don't know if people have heard that term. But there are capsid viruses which are made up of protein coatings. Those are way more tough. These envelope viruses have a fatty acid coding. And they're pretty weak.

That is part of the silver lining of this. We're dealing with a virus that is pretty weak. And so, it's not very hard to kill it. Washing your hands will do that. The biggest way of transmission still is

someone coming in contact with the virus with their hands, and then touching their eyes, nose and mouth and getting it into their respiratory tract. That's how it typically is transferred.

Now, that being said, there's some new studies out that show that it can last in the air under ideal laboratory conditions for up to three hours. That's likely not as high. It won't be three hours in the real world setting where there's more moisture, there's heavier droplets of moisture in the air to bring it down to the ground, where there's wind and currents and all that. But it can potentially last in the air for some time.

It does not last on things like surfaces for quite a long time, much longer than the typical flu does. For example, on metal, glass, plastic, like hard surfaces, up to 72 hours; on things like cardboard and paper, up to 24 hours. So, that's problematic.

So, we could talk a little bit about if you are really practicing your social distancing like I am, you also want to **be careful what's coming into your house**. We're getting endless amounts of Amazon packages, right? We're just ordering everything we can on Amazon. We're not hoarding anything, but these are just regular supplies that we need. **But every time a package comes in from Amazon, there's a couple of risks.**

Number one, on the outer package itself, there could be some traces of virus on it. And it could last up to 24 hours. And then, when you open the outer package, the box or the envelope, the things that are contained on the inside, whether it's supplement bottles or food or whatever it may be, on those surfaces, there could be some virus. Whoever was packing that could have a contaminated hand, grab it and put it in your box.

So, the way we're doing it is as packages come to the front door, we open the front door, I bring it into right on the inside of my front door, everything gets either sprayed with a 70% isopropyl alcohol and wiped down. It's allowed to sit for about 10 seconds, and then dry it off before I bring it all the way in the house.

And then, the cardboard boxes and envelopes and all that, I gather them outside. And I take them right out to the recycling area. So, you want to be careful not bringing in a whole bunch of packages into your house, into your kitchen, opening everything like normal and just putting things out on your counter. Any one of one of those things could be a vector. So, you want to be like a nutty kind of person level of consciousness about this. I'm sure there are neighbors that are looking at me with the door open and I'm in my robe, and I'm sanitizing things coming out of packages. But you know, you can't be too careful.

Shivan Sarna: So what if you don't have isopropyl—that's a mouthful. What if you don't have that alcohol? I know it's sold out in so many places? Would a bleach solution with water work?

Kiran Krishnan: Yeah, bleach solution + water totally works. Ammonium chloride, most of the household cleaners have ammonium chloride in it. Quaternary ammonia is another thing you can look for.

Most of the alcohol-based solutions will work. There are cleaners with both ammonium chloride and ethanol in it.

And then, isopropyl alcohol, I actually just bought some myself, so it may be available. I actually kind of learned this from my sister. She's a professional makeup artist. And of course, that whole world is shut down right now. But they have tons of pure isopropyl alcohol containers in the makeup area because they clean all of the makeup brushes and all that with that stuff. So, although people have gone crazy buying hand sanitizers and Clorox wipes, you might still be able to find isopropyl alcohol.

And if you find 100%, then dilute it down so you make a 70% solution—so go 30% water, 70% the isopropyl alcohol. What I bought recently was just actually 32 gallon things of 70% isopropyl delivered in like three or four days. And I just put it in a squirt bottle. And you just squirt it on stuff.

The retention time for when you clean things, you want it to sit on there for about 10 to 15 seconds. That seems to be the predominant retention time for all of these cleaners to clean and to kill off this virus.

So, as long as you're doing something, you're doing a good job because it's not a particularly robust virus in terms of its stability outside of the body.

Shivan Sarna: A couple of things… Lysol, I know I've read alongside you, it does work. However, it is toxic to cats. So please be very careful just about that aspect of it.

Shivan Sarna: Appropriate! This is a great question because it's so practical. What about alcohol in vodka or something? Will that work too?

Kiran Krishnan: it doesn't seem to have high enough concentration… unless you're drinking Everclear all day long.

Shivan Sarna: And we're not talking about drinking it, you guys.

Kiran Krishnan: …pouring it on things. Most of your recreational alcohols will have somewhere around 30% to 40%. That doesn't seem to be high enough to kill the virus.

Now, with a long retention time, it might. So, when it comes to disinfection, there's two components to it. There is the concentration of the active disinfectant, and then the retention time. Any time the concentration of the active disinfectant—in this case, alcohol—is low, you need a higher retention time.

So, it's not to say that the virus sitting in a glass of Ketel One Vodka for an hour wouldn't be killed. It probably will, but it's just not practical.

So, isopropyl alcohol… I've worked in a biosafety level 3 laboratory on HIV vaccines and other pathogenic organisms, 70% isopropyl alcohol kills everything including ebola. So, if you can get your hands on that, that's what you should try to use.

Shivan Sarna: And also, he was just talking about **makeup artists, brush cleaner, that's the way you would buy it. It's called *brush cleaner*.** But if you can't find that, diluted bleach is a good solution, since a lot of us already have that at home.

And leaving a package outside for 24 hours, Kathy, "I just don't know how practical that is. Are you going to have somebody steal it?" I think if you can treat it… I know everybody's got different circumstances, but that would be awesome.

Nathalie is asking about thyme and oregano essential oils as a potential virus killer?

Shivan Sarna: Yeah, the problem with it is there's no evidence yet, right? So there is evidence of antiviral activity of numerous herbs. The problem with this particular virus is it's called the novel CoVID19 or SARS-CoV2 because it is a novel virus. And because this is such an important situation, we don't want to make assumptions on things, right?

So, even though some herbals have been shown to work against influenza and other viruses and have antiviral properties (even things like silver have been shown to have antiviral properties), we don't have evidence yet that it has antiviral properties against this particular pathogen.

So, we want to go with the evidence that we have. So go with cleaners.

Listen, I'm the last guy in the world that would have these types of disinfectants in my house. If you've listened to lots of my talks, I'm not for disinfecting your world. We need microbes, and we need that exposure. But I have a lot of isopropyl alcohol in my house right now because this is important enough where we have to take those steps.

Shivan Sarna: And where did you find it? You know, I'm a shopper. Where did you find yours?

Kiran Krishnan: Oh, the cleaners that I have? Oh, I actually just bought them on Amazon. So last week, we got a delivery of Lysol wipes. And then, the isopropyl alcohol, I just got delivered two days ago.

Shivan Sarna: You just maybe have to wait a couple of days, which I know is not ideal. But hang in there! Hang in there… hang in there.

Kiran Krishnan: And here's one of the things I found too. The search that people are doing is searching for *hand sanitizer*. They're searching for *disinfectant*, right? So those kinds of keywords are pulling up the results that most people are seeing, and then people are buying those things out.

So, when you search for things like *isopropyl alcohol*, even if you just look for *isopropyl alcohol*, that gives you a whole different search criteria that you wouldn't find if you just searched for disinfected. Those people that are selling industrial types of isopropyl alcohol are not necessarily tagging the word *sanitizer* and all that in their products. So you can look for that, and then it'll give you different results.

[14:44]

Shivan Sarna: I want to change the subject in just a moment. Monica is asking a great question, for those of us with SIBO and IBS and all these other possible things going on, what if you're sensitive to chemicals?

Kiran Krishnan: Yeah. So, if you don't have someone else in your household that can do this stuff for you, you should be very, very cautious about—of course, if we're using these kinds of chemicals, use it outside. Yesterday, we sprayed a couple packages inside the house. And it took a while for that smell and all that to go away. So, ventilation is really important.

One other thing you can do and what we've started doing with bigger packages is just opening the garage, going to the front door, taking things into the garage, and then cleaning them there, so that there's better ventilation and you're not breathing that stuff in.

Use gloves. Use hand gloves. We're all washing our hands a lot more. We're all using sanitizers. We're doing all these things that we don't normally do. Our hands are going to suffer from this. They're going to get dry and cracked. That makes it actually more open to infections as well. So be careful about that. Use gloves.

If you have a mask—I don't know if you do, I don't have any masks, but if you do—just use a mask. Use an N95 type of respirator which will lower the amount of that stuff you're breathing in.

So, those are things you can think about. If you can take the packages and open stuff out of the packages and leave it in your garage while the door is closed for a day or two, then that'll help a lot if you can't sanitize it at all. Like Shivan said, don't necessarily leave it on your front porch because people are losing their mind, people are going around stealing stuff. You don't want your house to become a target.

So, take that stuff, put it in your garage. Let it sit there for 24 or 48 hours before you bring it in the house. Typically, the virus will die on its own after a day or two.

Shivan Sarna: Okay, I'm going to totally change things up a little bit. And by the way, pretty much any soap works, guys, for your hands, for hand washing. So when I was in the different stores, I noticed that a lot of the natural stuff was still left because people want to nuke everything. But for your hands, the Myers hand soap is fine. You can use shampoo if you wanted to.

Kiran Krishnan: If it foams up, if you get bubbles from it, then it's a surfactant and that works, yeah.

Shivan Sarna: That is the key.

Carleen, a huge fan of yours and supporter of this group and fellow patients: “Have you discussed your data on South Korea with Vice President Pence? I think that younger people should be made aware that they may be spreading CoVID19 virus.”

There you go! That's a big one for you.

Kiran Krishnan: Yeah, I called him, and he didn’t pick up the phone. But I tell you what though, and it's really important, there’s a couple of things I've seen that have been troubling of course. In Chicago, over the last weekend, people were loaded at the bars for St. Patty's Day celebrations. And not surprisingly enough, we're now seeing an uptick in cases. There were a couple of parades in Miami last week. And now we're seeing an uptick in cases.

The data is clear that's coming out of South Korea and China. South Korea's data is actually some of the best. Because they're doing the most wide-scale testing, the data is getting stronger and stronger. They also have less of a questionable government. So you know that the data that's coming out is likely more accurate than what you see at a place like China.

But what we're seeing is that a huge percentage of the reservoir of this virus is in younger people, people between the age of 18 and 49. Now, those people aren't getting terribly sick. And because of that, they're not really conscious of their ability to be a carrier for this.

Remember, you can be a carrier for this up to two weeks without ever having symptoms. And why is this so important? Because if you look at something called the RNOT of this virus—this is the rate of infection of this virus, how easily it spreads—it's somewhere around 3. So, for every one person that's a carrier, will infect three others. And those three are going to infect three more. One person within one jump which is in a day now has led to 11 infections. And then, all of a sudden, you're going to go to 30 and so on.

Recently, just yesterday, I saw an article about a doctor in Wisconsin who showed up to be positive. He of course didn't know that he had it because he was asymptomatic while he was transmitting it. And being a doctor, he's doing his work which is an important thing that he's doing. But now, they are testing 200 people from that one case because when you do the traceability, you see all of the connections that it affects.

There's one lawyer in New York. The early cases in New York, they've traced back 50 infections to one person. And not to victimize the person like they're doing something wrong. He didn't know he had it. But that's how transmissible this is.

You could be completely asymptomatic and infect a couple of hundred people in a very short amount of time.

That is so important for our young people who are not really thinking about this as serious as they should. Think about the impact that they have on everybody else.

Now, here's some new data as well. This is coming out of Europe. They're seeing that 40% of the cases of people that require hospitalization are with people under the age of 40. So, as we get more data globally, we're seeing that, "Wait a minute, people who are in their 20's, 30's and 40's might actually be more impacted by this than we originally thought."

We were all thinking this is an elderly thing. You have huge amounts of chronic illnesses. Those are the people that are being infected. But in fact, out of France and Italy, the data is coming out that 40% to 50% of people are under the age of 60. That's 50% under the age of 60. And then, out of France, it's 40%, under the age 40.

You're not immune to it. Younger people are not. They are vectors, and they can get really sick themselves.

One other thing, one of my friends was kind of taking a walk around his neighborhood, and he sent me this message and said: "Hey, if you get to talk to people, tell them about their teenagers that now that

we're off school,"—and I know, for a lot of parents, it's hard to corral and keep your teenagers at home. He said he saw groups of teenagers all playing basketball together, like 6 or 7 or 8 of them.

That's not social distancing. They're going to go, and whoever they're in contact with, 15 of those people, whoever they're in contact with, that's all the contacts that they're bringing back home every single day. So, as hard as it may be, keep the teenagers corralled at home. If they have to sit it on a device all day, let them do it because it's really important to keep that lack of contact and social distancing.

Shivan Sarna: I'm going to go a little bit more quickly because we only have so much time. And we have some really super duper strong questions.

Okay, don't laugh. I'm in a green room at work.

Kiran Krishnan: Ooh, you went dark right now.

Shivan Sarna: I'll throw this one your way, stand up and make body motions, so the auto light goes back on. There it was!

What about raising core body temp and how to best do that? I think saunas have been getting some attention.

Kiran Krishnan: Yeah, having an elevated body temp for part of the day is going to be beneficial. That's typically beneficial anyway. People should be practicing that. I've been in my infrared sauna every single day for around 15 to 20 minutes—hot showers, exercise, if you have the luxury of sitting in your own sauna. Mine's a little foldable one. So it's not a big, fancy sauna, but it does the trick. But take a hot shower everyday. Breathe in the steam and let yourself sit in the shower and enjoy the hot water for a period of time.

So, you can do some exercise to get your body temperature up. And then, while you're still warm, jump into a hot shower. These are just things that are good for your system in general. We're not saying that that's going to cure CoVID19 or treat CoVID19, but that's just good for your system to stay healthy because we all need to stay as healthy as we can this time.

Shivan Sarna: Okay, this is not medical advice, you guys. This is a brilliant microbiologist who's sharing his wisdom and his observations. I just like to always do that disclaimer.

By the way, vinegar does not kill the virus. I want to be very clear with you. I do know that. What about fulvic acid for assisting the decrease of the viral load in addition to the use of nitric oxide which may bind

to scepters protein bound with virus. ACE inhibitors increase the virus due to binding to H2 receptors, more dangerous for patients with HTN on ACE high blood pressure meds?"

Hi Sue! That was a very complex commentary. But let's break it down. What about fulvic acid?

Kiran Krishnan: So there's no evidence on fulvic acid inhibiting the virus attachment itself. It's too new. Remember, we only discovered this virus like two and a half months ago. So, we don't know all of these things.

What's good—and this is part of the silver lining—is they've elucidated the pathophysiology of how the virus infects quite a bit. But they haven't yet tested a bunch of things against that. So we just have to go with what we know right now.

We *do* know that the virus uses a receptor called the ACE2 receptor in order to bind and get into the cell. Now, we know that one of the reasons why ACE inhibitor use actually increases your risk is because most ACE inhibitors are ACE1 inhibitors. And ACE1 inhibitors actually increase the expression of ACE2. So it actually increases more targets for the virus.

We also know that people with chronic illnesses or who are older or who have heart disease or blood pressure tend to have higher expression of ACE2. ACE2 is a receptor that your body increases expression of as part of its repair and protection process.

So, the virus has very cleverly made its target a receptor that is going to be expressed at higher levels in the weakest of us in the society. That's the insanely brilliant part of this.

Now, of course, the virus didn't design this. It's happenstance of evolution. But that is the big theme here. The more inflamed you are, the more you have chronic illnesses and all that, the more expression there is of ACE2 which gives a virus more targets.

So, although there's nothing that we've seen so far that has shown that it can specifically block the binding of the virus, it does behoove all of us to try to bring down our systemic inflammation at this time because it just helps us be healthier. It helps us be more resilient.

So, I take a lot of things that are anti-inflammatory to begin with like fish oils and vitamin C and garlic extracts. And of course, the right type of probiotics can really help with that. **So, anything you can do to help reduce your systemic inflammation will help you be a little bit more resilient in this current pandemic situation**.

None of this is any sort of treatment or prevention for CoVID19. This is all about really improving your own health to stay a little bit more resilient.

So, think about inflammation, having inflammation seems to be a risk factor with this particular pathogen.

Kiran Krishnan: Inflammation, a lot of us have that if you have SIBO or leaky gut. So are you thinking like turmeric would be helpful, all of those anti-inflammatories?

Okay! Speaking of anti-inflammatories, this whole Advil—it's the sort of brand that comes to my brain about the Tylenol versus Advil scenario. If somebody doesn't know what I'm talking about, can you explain because you have a better language for it?

Kiran Krishnan: So, basically what the **World Health Organization is showing is that if you use NSAIDs or if you use ibuprofen, it actually increases the risk for progression of the illness.** There's two parts to it.

One is about controlling fever. Again, fever is your body's natural defense against this particular type of pathogen because this pathogen is heat sensitive. And so your body increases the fever. It's not the virus causing the increase in the fever. Your immune system is increasing the fever to make your system hotter, which makes it less viable for the virus itself.

So, part of this is, if you keep bringing down your fever with things like Advil, then you're basically shutting down your natural defense against it.

Now, if your fever is really too high and can cause other issues like organ shut down and all that, that's a whole other case. But if your fever is in the tolerable range, you may want to just maintain your fever. So that's one aspect of it.

Then the second aspect of it is the mechanism of action of things like non-steroidal anti-inflammatories like Advil versus Tylenol. So we've got Advil and Aleve—and I'm trying to think of the other brands—versus Tylenol which functions in a different mechanism.

So, this one has COX-LOX inhibition. And this one doesn't. One of the problems is these types that the Advil and Tylenol type of fever reducers actually bring down the parts of your immune system that are important to fight the virus versus Tylenol… which doesn't seem to be do that.

And that's part of the reason why, in kids, if you can, use Tylenol more when they get sick and they get the flu and so on. You tend to use Tylenol more than you use Advil and Aleve. So, that's just a general important thing to remember. Getting into the biochemistry of it, we can do that. But I think people will get

lost. I think the important thing to remember is we have good natural defenses. We need to let some of those natural defenses function. And some of those things are brought down by the use of Advil and Aleve.

Shivan Sarna: That's a great, great explanation that I hadn't heard put that way.

Okay, would Biocidin be helpful? What are your thoughts on that? We all love Biocidin for so many different things. But it hasn't been tested, right?

Kiran Krishnan: Right! We can't say that Biocidin is going to kill CoVID19. We don't know that. Nobody knows that.

But again, in the context of staying healthy, we don't want co-infections. We don't want other pathogens that are going to bring down our immune system and tax our immune system in a time when we need to function optimally.

[30:10]

Kiran Krishnan: Biocidin is something that's been helping you with controlling your seasonal colds or whatever it may be. But then we're still going through the cold and flu season. So anything that helps you in any other cold and flu season to stay healthy will be a benefit here. So, all of those things are on the table in terms of keeping your body functioning optimally and also maintaining some resilience.

That's another really important part of this message. So one of the dangers that we have here in the US of what this virus can do to us is we have such a huge proportion of the population that has chronic conditions, right? We're not seeing that as much in other countries. We're seeing that in Italy where you have a higher percentage of elderly population, and you have a higher percentage of smokers. There's about 24% of adults in Italy that smoke; in the US, it's only about 12% to 13%. So we're okay there. And we don't have as high of an elderly population. But we do have a much higher population of chronic metabolic syndrome—things like obesity, diabetes and heart disease. So those people are vulnerable as well because, again, all of that drives inflammation.

So, think about that vulnerability. Think about the inflammatory processes that are going on in your body outside of this whole virus. All of those things tax your body. We want to be managing those things, so we're more resilient against this pathogen.

Shivan Sarna: Okay, guys, what about zinc vitamin C, astragalus—that I didn't pronounce totally right. What's the story with elderberry not being recommended for the coronavirus?

Kiran Krishnan: Well, you know, it's interesting. So there was a big surge in elderberry recently. It's hard to find elderberry right now because it's sold out. And elderberry has this kind of—it's not an antiviral in itself, but it has this ability to upregulate your immune system, the parts of your immune system that go after viruses, right? So you can have bacterial infections, parasitic infections, allergens, viral infections. All of those actually have different parts of your immune system that work against those. So there are certain compounds that have been shown to be able to upregulate things that battle viruses. Elderberry has been shown and known to be one of those things. So then the surge of elderberry purchases went through.

Now, some people are coming back and saying that, "Hey, we don't want people to think of elderberry as an anti-CoVID19, as a treatment for it. So that may be where some of the pushback is coming from. To me, elderberry is fine. It supports your immune system. If you're trying to stay as healthy as possible right now, it's totally fine to take it. My kids take it. They take it just normally once a day, especially through the cold and flu season. They're doing that anyway. So we're just keeping them on that.

What I'm focusing on right now, which I don't normally take, is vitamin D, and especially this time of year, because now we're also not going out. And over here in Chicago, the weather's been horrendous. We're not even seeing the sun if we went out. So, vitamin D is really important in part of the antiviral battle in your system. So, you're upregulating the parts of your immune system that fight viruses…

I'm taking vitamin D myself. I'm taking somewhere around 5 to 10,000 IUs a day. I'm taking zinc myself. Zinc is an important part of upregulating the battling against the viral part of your immune system. I'm taking magnesium, which is another important part of it. Vitamin C, I'm doing. Typically, during the cold and flu season, I'm doing 2000 to 3000 mg of vitamin C, but now I'm doing a little bit more. I'm doing about 4000 mg. of vitamin C. Of course, the probiotics which upregulate our T and B cells and their proliferation.

And again, none of these things are a treatment or a prevention for this. These are all just ways to kind of support your immune system and keep you a little bit more resilient against all of this.

Shivan Sarna: Hey, Kiran, do you have an announcement by any chance? Did you get that…?

Kiran Krishnan: Oh, yeah! We've been doing as much as we can to support people's ability to get products that they need to stay healthy and all that. We always try to offer for your support everything that we do. We've got a 15% coupon code. And I think the code is HEALTHGUARD. And this is for your people only through the link that you provide them. And that's for all of the products that we have to your

system. So everything is 15%. [expires March 22, 2020 at 11:59pm Pacific Time - or use coupon DIGESTIONSOS for 15% off on your first order]

It's interesting… I'll just mention this very quickly because we need to get to the rapid fire questions. We're seeing a big uptick in our products going out into the marketplace. And in talking to people as to why, we're finding two things.

Number one is people are just kind of increasing their doses of everything they take that they typically take to be healthy. So that's one thing. But another thing is they're actually like sending it out to their friends and family, people that aren't as conscious as a lot of your audience is of health and wellness and so on. So they're sending it to their teenage kids. They're sending it to their kids who are in college. They're sending it to their uncle that doesn't ever look at this kind of stuff.

Shivan Sarna: Thank you! This is where Kiran has also been so wildly supportive of SIBO SOS®. Normally, you have to go to a practitioner to get his products. But because of the relationship that I have with him and the community. You have to use a patient direct code, **SIBOSOS**. And then, enter **HEALTHGUARD** as the coupon code—it's different than the patient direct code—usually, it's only a wonderful introductory 15% off that first order.

It's not on the stool test because that would be super complicated. So that's what I wanted to say.

When is Restoflora coming back?

Kiran Krishnan: Ah, yes, there's been a global shortage on *Saccharomyces boulardii*. But we have some on order. And we're expecting it to be back in three or four weeks. And what's really awesome about that product—and whatever I have left, I've been taking higher doses of it because **the clausii that's in there has been shown in other studies (of course, not related to CoVID) to improve upper respiratory health. And that's kind of the area that we're all concerned about right now**.

Oh, and then I should mention that as well, the things I'm taking. **The other thing I'm taking right now that I don't normally take in high amounts of is beta carotene**. Beta carotene has lots of studies on it on reducing the inflammatory and hyperactivity reactions in the upper respiratory tract. And so for me—and I've had this what we call *exercise-induced asthma*. I don't have asthma, per se, but it's exercise-induced. So, my respiratory tract is more prone to hyper reactivity. And so I've been taking beta carotene for that reason as well.

Just a little tip for people if you want to keep your lungs nice and healthy, that seems to help.

Shivan Sarna: More questions, Lauricidin is an antiviral. What do you think?

Kiran Krishnan: So Lauricidin is an antiviral. Of course, there's no evidence that it works against CoVID. But they do have evidence on it helping with other types of viral infections. And this time, again, I will want to reiterate this, we are still in the cold and flu season. And because we're still in the cold and flu season, you've got this risk of picking up other things.

And in fact, that risk of picking up a cold or a flu is probably still higher than picking up CoVID19. So you want to make sure that your system is optimal and that you are as resilient as possible. So anything you've done to protect yourself against other viruses, keep doing it. We need to have a functioning optimal system.

Shivan Sarna: It is Lauricidin. It is from coconut… yes, it is.

Let's see, can Megaspore assist with *C. diff* for a patient that is more compromised to fight the virus?

Kiran Krishnan: So we are doing a bunch of *C. diff* studies right now with Megaspore. We've got two studies completed at Cleveland Clinic. And these are animal studies (so they're not human studies yet). And what we're seeing in the animal models is that the spores in Megaspore, in that particular formulation, does compete against the *Clostridium difficile*.

Whether that translates to humans, we still don't know. But the spores are well known to be competitive. I would say it's definitely not going to do any harm. And it's going to more than likely help in some way. So absolutely…

Now, clinically, we've had lots of patients who deal with *C. diff* recurrently use Megaspore with success to maintain their digestive health. But again, we have that animal study that shows it does compete against *C. diff*.

Shivan Sarna: Alright! So, that means if it competes against *C. diff*, that's good, right?

Kiran Krishnan: It's a positive thing. And again, it's not going to do any harm if you have the issue. If anything, it can be a help and support.

Shivan Sarna: Okay! And I know some of you are new to Kiran and Megaspore and Microbiome Labs. You can go to MicrobiomeLabs.com and read about all of these very specialized products. So, we're talking, and I know some people, you might be thinking, "There's lingo! What are you talking about?" because I'm about to say something that sounds like lingo. But go to the website and read more about it.

What about HU58 for the virus?

Kiran Krishnan: Yeah. So HU58 is really interesting. In fact, it's been selling like crazy maybe for this reason. But one of the things that the spores, especially the *subtilis* does, is upregulates T-lymphocytes in the Peyer's patches. So, you take it orally, and as it goes through the digestive tract and interacts with an area of your gut in the ileum called the Peyer's patch, when it interacts with that area, it upregulates your immune systems' production of T-cells. So, that is a big benefit in your body's defense against viruses.

And so, for that reason, I'm upregulating my intake of it. And again, it's about staying resilient and staying healthy. We don't know if that's going to kill CoVID19. We can't say that at all. But it's about upregulating your systems that help defend against these things.

Shivan Sarna: What about MegaIgG2000 in conjunction and Megaspore and HU58 all combined? But we haven't really spoken about MegaIgG2000.

Kiran Krishnan: Yeah, MegaIgG is awesome actually. So that's another one of the products I've increased my intake of.

There are studies on viral challenges using MegaIgG. There's a number of animal studies because it's been used in animals a lot where you infect the animals with viruses specifically, and then you use the immunoglobulins to see if their immune system mounts a better response. In general, you see a better response by the immune system against a viral pathogen when you use the IgG.

Now, again, this was not done with the CoVID19. I don't want to make even the inference of that because that would not be ethically right. But what we know about the IgG is it does support the immune system with the defense mechanism.

So, that's another reason why I'm taking more of that each day. I typically take four capsules of that which is a 2-gram dose as my maintenance. But nowadays, because of what's going on, I'm taking four in the morning and four in the evening before bed as well.

[44:46]

Shivan Sarna: Okay, can Megaspore be taken with vancomycin?

Kiran Krishnan: It can… yes, it can be. And in fact, the *C. diff* study that we're doing at the Cleveland Clinic, a couple of the arms of that study is in concomitant treatment with vancomycin. So, it can be taken

with it. It can be taken with Xifaxan. We have a study on that in liver failure patients. So we've shown that it can be taken with pretty much any antibiotic.

Shivan Sarna: What do your fellow microbiologists and your fellow medical experts around the globe talking about? What are they telling you? What do you find to be fascinating? What's keeping you up at night with “That might be it! Maybe that'll help!”?

Kiran Krishnan: Yeah. You know, to me, well, there's two things, two messages I want to point out.

Number one, I think we're going to have a treatment for CoVID19. There's actually some really interesting studies going on in a couple of pharmaceuticals and a couple of natural products. China is doing some studies on herbal compounds that seem to be having some success. We don't want to say too much now because we don't want people going crazy and trying to buy those and trying to treat themselves with it.

But the promise is that we know a lot about how this virus attacks the system. Because we know about that, there are ways of targeting that mechanism. And I think sometime in the next six, seven or eight months, we're going to have some very promising treatments for this.

So, if this pandemic should last longer than we want it to, we will likely be offered a treatment that could be pretty effective for it which could just kind of bring everything back down to normal, right. So that's one really good thing.

But here's another really important message I want people to have in their mind. This is a bit of a dress rehearsal for something that is going to come along that's much worse. The advantage of CoVID19 is that it's very contagious, but it's also not particularly lethal compared to the types of viruses in this family. Take MERS, for example. MERS is a coronavirus. It's the Middle East Respiratory Syndrome virus that came out—I think it was 2004 or 2005 or something like that. MERS has a mortality rate of 30%. This has a mortality rate of 1%, around 1%. And so, it's about 30 times more lethal, but it's not as contagious than MERS.

SARS has a mortality rate of 16% to 17%. So it's 15 or 16 times higher than this, but it's not as contagious. At some point, we're going to be faced with a virus that is as contagious as this is and as lethal as some of those other viruses are. That’s when we're going to be in trouble.

So, we are going through a dress rehearsal right now as a society, as a global society, for how do we deal with these types of pathogens because it's going to come up. Ultimately, this is the kind of thing that's going to really hamper and take us out.

And it's a contagion. It's not going to be immigrants. It's not going to be terrorists. Terrorists are a problem in their own right, but it's not going to be those things. **All of those things that we think about and we buy warships for and all that, those aren't the things that are really going to take us out globally as a society. It's going to be a pathogen**.

So, everything that you do right now to protect yourself against this is going to be important to continue to do for your own personal health, for your family's health, because that makes you more resilient against these kinds of things.

So, just keep that in mind. We'll get through this. We'll probably be fine as a society. But let's always be prepared and ready to act when the next one comes along.

Shivan Sarna: And we have resources. And we have resilience as a globe. So I just want to ask everyone to send out thoughts of prayers, gratitude—that's right, gratitude—for what we do have and what is working and for friends who are wise and share their knowledge with us so freely—and give us 15% discount! Thank you on all of the Megaspore products. This is a line obviously I truly believe (or I wouldn't have Kiran here talking about it). And so it's worth a try.

Shivan Sarna: We love you. We thank you so much. I will try to get you those questions as soon as possible.

Kiran Krishnan: Take care! Bye bye.

[50:54]