

Dr. Jill

Your Functional Medicine Expert®
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[#36: Dr. Jill Interviews Dr. Sandeep Gupta on Mold Course 2.0](#)

Text:

Dr. Jill 00:12

Hello everybody. If you were planning on joining us in about 20 minutes, we're a little early, but this is going to be recorded, so you can watch it anytime. If you jump right in the middle, you will be able to watch it as many times as you like. Just a little bit of housekeeping: You can also find us on YouTube under the 'Jill Carnahan' channel. Please subscribe there and watch all the videos. We've got lots of mold experts, and today is going to be one of my favorites with Dr. Sandeep Gupta, and I will introduce him in just a moment. Please leave your questions in the feed, and I'll try to follow them. So if we get any live questions, we can actually jump right in and answer those questions here on the podcast today. And again, I think you know my background in mold; this is going to be a really exciting and fun discussion as we dive deep.

Dr. Jill 01:00

I want to introduce my guest in case you don't know him. Dr. Sandeep Gupta is a board-certified general practitioner practicing on Australia's Sunshine Coast. I was actually supposed to go there this spring. Of course, with the pandemic, I was not able to make it. So I hope maybe next year I'll be able to be back. Was the conference that I was looking at attending close to where you're at?

Dr. Sandeep Gupta 01:23

Yes, it was just an hour away. Metagenics Congress on cancer, I think it was.

Dr. Jill 01:28

Excellent. So hopefully next year or soon I'll be able to go. I've never been to your part of the world, but I hear it's amazingly beautiful. He has a fellowship and master's degree in nutrition and environmental medicine and five years of experience working in intensive care medicine. He runs a busy integrative medicine

practice, Lotus Holistic Medicine, which you can find online. And go ahead and give us your website if people want to find you.

Dr. Sandeep Gupta 01:52

It's lotusholisticmedicine.com.au.

Dr. Jill 01:55

Perfect. If you want to read more, his bio is there. I won't spend any more time, but we have become friends even across the world because of our common interest, our common friends, and our common societies in this area. And it's a worldwide problem. I'd love to start, Dr. Gupta, as far as your story [goes], [with] just a little background. We all have a story. I always joke that I didn't choose mold; it chose me. So tell us about how you got into this area of medicine.

Dr. Sandeep Gupta 02:23

Yes, I think that's pretty right, Dr. Jill. I was actually working as an intensive care physician here in Australia, in Brisbane, for about five years. I was mostly dealing with post-cardiac surgery cases and those kinds of things, but also some acute cases of sepsis. But it was in a private hospital. And really, although I had always been interested in holistic medicine when I was a medical student, when I was going through my residency, it had really been hammered into me so strongly that I had to become a specialist, and I had to really go into one area of medicine that was particularly advanced, if you like. Intensive care was always thought to be one of the most advanced areas, so I naturally found myself in that area. And I guess you could say that is probably one area in which modern medicine really shines because in those acute cases where someone is going down the tube really quickly, the technology and so on that's available in conventional medicine really fixes them up very quickly. So I do think that that type of medicine is very strong.

Dr. Sandeep Gupta 03:31

However, I then had a health crisis of my own when I was in America and basically got the gut flu when I was traveling in Oregon in 2005. I actually treated myself with ciprofloxacin based on the sensitivity that the bug had, which is the usual thing; you just pick the antibiotic based on what a bug is susceptible to. But I had no idea that that could actually wipe out a lot of my gut flora and leave me really, really debilitated. So I flew home just literally the day after I took this antibiotic—it was just a single dose—and I came home to have debilitating headaches and virtually no

energy. I was, all of a sudden, like a chronic fatigue syndrome patient, and I had no idea what had happened. I went and saw one of the neurologists at the hospital where I was working, and really, I guess I was struck by the fact that he didn't seem to really take into account anything that had happened. What he suggested was prednisone—I didn't expect that—75 milligrams daily, and he diagnosed me with cluster headaches.

Dr. Sandeep Gupta 04:44

Of course, prednisone has its place and can be used in certain instances, but in that particular circumstance, I felt: "Hang on, there's got to be another way here. This is definitely related to the antibiotics, and there's definitely some imbalance that this has created that I need to rectify." So that led me on a journey [where I was] starting to research and understand the microbiome. I didn't know what the microbiome was at that point. I didn't know what probiotics were; I'd never heard of them. I thought Candida was just something that very, very rarely affects someone who is immunosuppressed or something like that. So it started me thinking in a totally different way and getting an idea of balance in the microbiome, and luckily I was able to fix myself up quite quickly using probiotics and getting off gluten and dairy. I was eating quite a high-carbohydrate diet at the time, and I really just brought some very simple solutions on that level. Glutamine was another thing that was very helpful because I had—majorly—leaky gut going on.

Dr. Sandeep Gupta 05:47

So that really opened my eyes to the idea that there was a whole, deeper concept of balance in the human body that could be understood, and it started me to go even deeper. So I started doing that fellowship in nutritional and environmental medicine that you mentioned. It took me about three years, and it led me to just start thinking in every patient I saw: "What could be the possible nutritional and environmental factors that could be involved?" So rather than having a rheumatoid arthritis patient and simply reaching for the prescription pad, it was more like: "Okay, let me start thinking. If my illness could have been caused by antibiotics, a high carbohydrate diet, and other things, what could be some of the factors that could have led this patient to have developed this illness that may not have been brought out into the spotlight?"

Dr. Sandeep Gupta 06:40

And to start with, I lacked confidence. But then, as I started looking and things started getting uncovered, I realized: "Hang on, I actually can do this, and it's a really beneficial way of approaching medicine and health. And just because this person may have seen esteemed doctors before now, that doesn't mean that I can't bring anything to the table just by asking the right questions." One of the textbooks I had going through medical school had a really strong statement on it, which said, "More is missed by not looking than not knowing." Isn't that such a cool thing?

Dr. Jill 07:24

It's so true. It's so true because we don't have to know all the answers. We have to know where to find the answers or know that we heard something about that somewhere so that we can go digging deeper, right? You and I have been doing this for a long time. We're kind of experts in this field, but I still don't have all the answers. But I always know that there are people that I can talk to or ask, or research that I can look at and help me discover. I feel like a lot of times we're on the cutting edge of some of the discoveries, even with mold-related illnesses and ICI. And some of the groups and doctors like you and me that are doing this work are constantly discovering new and better ways to treat it.

Dr. Sandeep Gupta 08:01

Absolutely. It's a process of discovery. It's a process of inquiry that we do with the patient together. And in a sense, there's a humility there because we don't know what the answer is for any individual person. But what I'm committed to doing, and I'm sure you are too, is at least asking the questions—the deeper questions. Could there be nutritional and environmental causes behind people's illnesses? So then I actually moved on and totally changed my career from intensive care to integrative general practice. So I did two fellowship programs at the same time. I then moved up to the Sunshine Coast here to just do what was called a rural term, and all of a sudden I fell in love with the place. I was supposed to come for one year, and here I am 11 years later.

Dr. Sandeep Gupta 08:53

But in 2012, which was just two years after I moved here, I had a nice flood—really badly. There were really bad floods at that time. My partner at the time was basically bedbound, and she had to stop what she was doing at the time. She wasn't able to work. I didn't understand what was going on; I had no idea. But I could easily and clearly link it to the flooding event because the timing was exactly then. So I

really started asking myself, "How could the mold that had developed from this have affected her human body?"

Dr. Sandeep Gupta 09:31

Around the same time, a patient came in and started telling me about Ritchie Shoemaker. She said that she had watched a podcast with Dr. Ritchie Shoemaker, and she had heard about something called the VCS test, cholestyramine, and so on being used. And I looked at her blankly. "What are you talking about?" She said I should look into it a little bit further, so I did. I went on to his website and found out that he had a physician's training. So I signed up for that straightaway, no questions asked, and contacted his office.

Dr. Sandeep Gupta 10:11

I think it took six months to actually make a connection. Then at 1:00 a.m. in the morning, one fine night, I had a Skype with Dr. Shoemaker. He started talking to me and asking me questions about what my interest was, and he pretty much said, "I'm going to make sure you get certified." And he said, "Let's get started on this." He said that within one to two months, he wanted me certified.

Dr. Jill 10:40

Fast track.

Dr. Sandeep Gupta 10:42

It was a fast track. They sent me the WHO guidelines and the GAO guidelines on water and dampness. I was like, "Oh my God, this is a totally new language." And I was just determined because someone close to me was suffering. I was determined to learn it. So he started firing off 'C4A,' 'MMP-9,' and 'TGF- β ,' and I was like: "It's 1:00 in the morning, man. I don't know what you're talking about."

Dr. Jill 11:09

Well, it's funny because I love that you framed it in the beginning. We both went to allopathic medical school on different continents but with the same kind of training. I love that you started with intensive care and trauma medicine; these kinds of things are the best in the world—what we trained in—because if you have a car accident, a heart attack, or a stroke, you're going to want the best that we have to offer with that kind of medicine to save your life.

Dr. Jill 11:33

However, we're not so good at chronic illness, inflammation, or lipopolysaccharides in the gut—which is part of your story, [concerning] that endotoxemic effect of gut bacteria causing inflammation in the body and the leaky gut—or the permeability of the gut, at which years ago doctors, our colleagues, would have looked at us with crazy eyes: "What are you talking about?" And now it is well documented—the hyperpermeability and the link with lipopolysaccharide. This is linked to cardiovascular disease, obesity, diabetes, insomnia, mood disorders, and all kinds of things that we see. But all that to say, things like autoimmunity, chronic inflammation, and mold-related illnesses—there's not one medicine for these illnesses. Actually, they often get worse if you just apply that model of a medicine or a surgery, so we really need to think outside the box for these things.

Dr. Jill 12:23

And I love that your story also emphasizes... Usually we're up against [a situation]—I always say it's usually ourselves, a close friend or family member, or someone that we really care about that gets sick—and we don't have the answers. So we're struck with, "Okay, how do we find a cure or find help for this person that we care about who got sick?" So that's very, very similar to most of our journeys. Now I'm really curious because of that intensive background. That's a phenomenal background. And mold-related illness has a lot of dynamics in the body, whether it's tachycardia, POTS, or those things. Do you feel like you're training in hemodynamics and some of the stuff you did in the ICU—at least that's what we call it in the US intensive care—

Dr. Sandeep Gupta 13:03

Yes, that's how it's called here too.

Dr. Jill 13:04

Yes, same thing; they apply to some of the knowledge of the dynamics of the body in a mold-related illness. Are there little pieces that cross over?

Dr. Sandeep Gupta 13:10

Yes, definitely. The main crossover area is what we call sepsis. In the area of sepsis, a classic thing is that someone gets a urinary tract infection or has an episode of

pneumonia, which is seemingly pretty mild, and then, all of a sudden, they get really sick. And all of a sudden their whole body is breaking down, and people around them are going, "What happened?" It's like, "Oh, my mother is in ICU now." And you just had a little urinary tract infection. So what happened there was that infection then led to a whole cascade of inflammation, a whole cascade of cytokines. And even once the infection has been treated, that inflammatory pathway may not have gone away. So that basically needed treatment in and of itself.

Dr. Sandeep Gupta 14:04

So often, what would happen is that the patient's blood vessels would get very leaky, and so they needed to go on norepinephrine, adrenaline, or some of these other inotropic medications very quickly. Sometimes they've needed like 10 liters or more of IV fluids in a single day because all of the fluid from their blood vessels starts going into the wrong places because their vessels are leaky. They then get leaky lungs. This is also a topical thing because it's what happens to COVID-19 patients as well, who become very ill. They get something called ARDS, where basically fluid fills up their lungs. All of a sudden, they may need to go on a ventilator, and they also get steroids as part of their treatment.

Dr. Sandeep Gupta 14:50

Interestingly, intravenous vitamin C is also a really important thing, although that hasn't been widely adopted, I don't think, in ICUs. But another really important part of the treatment is intravenous vitamin C, along with steroids and vitamin B1 or thiamine, [which] are some of the really key things that have been shown by Professor Murray to be very helpful. He's now trying to demonstrate it in large trials and so on. But most likely, that's going to turn out to be one of the most helpful things because all of these substances help with inflammation.

Dr. Sandeep Gupta 15:24

So I do think modern medicine is very good at dealing with sepsis, but what I noticed is that once patients were out of the ICU, they would still often have low-grade symptoms. Often they'd say: "Oh, I've got really achy joints or I'm really fatigued, and my brain's just not working like it was before." Really, in commercial medicine, we didn't really have any answers for that part. And that's probably where they needed a little bit of gut repair, where they needed to look at any lingering

damage that had been done there, and where they needed to look at other triggers of inflammation.

Dr. Sandeep Gupta 16:02

You talked about bacterial LPS and so on—that's likely to be the case because we know sepsis patients do develop leaky gut problems. So there was a whole other world there that could also have been addressed if we knew about the science of integrative medicine. It's really my utmost hope that at some point this comes into hospital medicine so we can be even more excellent in our medical care.

Dr. Jill 16:28

It really is a great framework because, when we talk about in mold-related illnesses, this environmental trigger... And in a minute, we'll talk about water-damaged buildings. If you're listening, how might you know what some symptoms are? But just to frame it, what Dr. Gupta is talking about is that we have these environmental triggers. I always say it's like toxic soup in a water-damaged building.

Dr. Jill 16:46

And granted, there's mold and the mycotoxins that that mold produces. And those are very, very small. They're ionophores, which means they go right inside your cells. Usually, we get them through inhalation. You can ingest them as well, but inhalation is the primary route in a water-damaged building, and then these go diffused right into your bloodstream. And they are trichothecenes, ochratoxins, and aflatoxins. And the list of damage they cause—trichothecenes have been studied for chemical warfare agents. They're kidney toxic, which is nephrotoxic, and they're toxic to the brain, nervous system, and all parts of the body. And like you said, they trigger this cascade of events called cytokines and inflammatory molecules, and then those guys go on and create the damage.

Dr. Jill 17:29

I always like to frame it like the flu or COVID. The virus itself isn't what causes the damage in the sense that the virus is the trigger to trigger your own immune system to have this fight-or-flight reaction to throw out all the armed guards to try to fight its way out of that situation. But your own immune system's response is what actually causes most of the damage. That's the same way with mold. And that's exactly what Dr. Gupta was saying in the ICU. These patients get inflammation from

bacteria. And again, in a water-damaged building, there is bacteria. There's yeast. There are other fungi. There are all kinds of things. And these contribute to the milieu. So if patients are all of a sudden, with the pandemic, stuck at home and having more symptoms, let's first talk about symptoms. What are the most common things that you see with mold-related illnesses? And then we'll go into: What do you do about it in your house or office?

Dr. Sandeep Gupta 18:19

Yes, absolutely. In most cases, the symptoms are pretty subtle or insidious to start with. They can be anything from fatigue to insomnia to just feeling a bit more flat—like a little bit more depressed than normal—to getting joint pains or muscle pains, or they can also be abdominal symptoms such as bloating or constipation. And in some cases, there are more local symptoms in the sinuses or the lungs, where people could be getting nasal congestion or shortness of breath. There are some more specific symptoms, like if you're getting more of a vibratory sensation in the body or a sense of static electricity shocks that are happening a lot of the time. That's pretty specific for mold-related illnesses. The other thing that people often get is the feeling that they're thirsty all the time and need to urinate all the time. So sometimes it can be mistaken for diabetes because you get abnormalities in certain hormones called ADH, or anti-diarrheic hormone, which can cause a similar kind of pattern to diabetes.

Dr. Jill 19:27

Yes, this is really common. Increased thirst and urination—it's similar in the sense that in patients with hemodynamic instability, that regulation system that we have is off-balance. Instead of conserving water when you drink and maintaining hydration in your vascular system, two things happen: That regulation called ADH, which you mentioned, is kind of broken. So you drink and you pee, and you drink and you pee, and you're actually dehydrated no matter how much water you drink because your body can't maintain the volume it needs to function.

Dr. Jill 19:58

That can also lead to things like postural orthostatic tachycardia, which is also called POTS, where you have very low blood pressure if you stand up quickly and your heart starts to beat very fast. People can feel really dizzy or lightheaded when they're standing up and maybe have to lie down to feel well, or they can't maintain

sitting or standing for long periods of time. There's something else that can happen in here, and that's that the mast cells can get angry and activated. Tell us a little bit about mast cells and why that's important to think about with mold-related illnesses.

Dr. Sandeep Gupta 20:26

Yes. That's something I've really only started looking at over the last two to three years. You'll recall we did a webinar about it maybe two to three years ago. One of the things I saw was that some of the patients who retreated for mold and CIRS would just react to everything. Often, they had a subtype of mold-related illness where they were getting a lot of flushing, burning, skin rashes, and so on. They tended to be very, very sensitive. Often they were reacting to the food that they were eating, and sometimes they could react to things as innocuous as water. So there was a subset there that I started to recognize where the chronic inflammation appeared largely to be related to mast cells.

Dr. Sandeep Gupta 21:11

Often, these patients would respond to being on a lower histamine diet and then getting on specific supplements or medications specifically aimed at the mast cells. So that could be simple supplements like quercetin, medication such as cromolyn and ketotifen, or even antihistamines, the H1 and H2 blockers. There's a trial-and-error process that often needs to happen in order for them to find the right treatment for them to be able to switch off that mast cell response long enough for them to then directly go and address the mold. But I am seeing that's a very, very important component for many people's illnesses.

Dr. Jill 21:56

Yes, oh gosh, I would totally agree with you. It's been one of the biggest things that's been the rate-limiting factor, the thing that stops people from getting well. If we as physicians don't address it, we can't really do the treatment protocols. For example, say someone's had a mold-related illness; they have pretty significant mast cell activation. You try to give them glutathione, binders, and these things. What you're doing is mobilizing the toxins, which is good because you need to excrete them. But as you mobilize, they can kind of get that reexposure, and it makes the mast cells incredibly angry.

Dr. Jill 22:28

Just for fun, I'll share with you guys, for just one second, a screen share. I just saw an article by Dr. Theoharides that shows this beautifully in a diagram. I'm just going to share it for a moment. This is the proposed diagnostic criteria. And you can see their common symptoms: Brain fog, diarrhea, flushing, headaches, hives, low blood pressure, itching, muscle pain, palpitations, and shortness of breath. Brain fog is [present] in, like, 95% of the patients. So it is really, really common to have a lot of those symptoms.

Dr. Jill 22:58

So what about the building? What do we do? For us here, at least in the US, there aren't a lot of great certified IEPs, which are indoor air quality specialists that really, really understand this illness. So there's a whole subset of remediators that can take away the mold. But if they're not really careful in how they do that, how they maintain that environment, and how they clean up the environment after, our patients tend to get sicker or not do well. I'd love to hear your experience with that and what you advise our patients to do.

Dr. Sandeep Gupta 23:30

Yes, absolutely. I think a lot of my experience in this area comes from making common mistakes. It's very easy to make mistakes in this whole area, and that's one reason why having a really good source of information regarding mold illnesses can't be emphasized enough. One of the key things is that you need to get a mold inspector, or what we call an IEP, who is familiar with CIRS, mast cell activation, and basically chronic illness due to mold. The reason for that is that they then understand the idea that even small levels of mold and other types of microbial contamination, such as bacterial contamination, can keep the inflammatory pathways activated in someone with these illnesses.

Dr. Sandeep Gupta 24:26

If someone doesn't understand this and really only understands mold at a superficial level, then firstly, they're not going to be able to look for mold in a deep enough way and to a thorough enough degree. And secondly, their recommendations are generally not going to be thorough enough to be able to eradicate mold at a comprehensive enough level for you to be able to recover. So that's one of the first key points: Knowing that all IEPs are not the same, that all

mold inspectors are not the same, and that if you take the time to choose a suitably qualified IEP, then that time is definitely worth the investment.

Dr. Jill 25:11

Yes, I completely agree. And I don't know about you—I'd love to hear your opinion—but for people when they come in my office, sometimes it's the believability. If you just ask a patient, "Do you have mold in your home?" 99% of them will say: "Well, no, there's no mold in my house." So you have to be a little sneaky about the questions. And it's not really sneaky; I just joke that way because you have to be a very, very good detective and say: "Is there condensation on your windows? Have you ever had a leak in your attic or your sump pump in your basement? Has there ever been moisture on the walls of your basement?" There are just so many questions that you can rattle off: Washer/dryer leaks? Leaks under your faucet in your sinks? What about your shower? The tiles—are they leaky? Are they porous?

Dr. Jill 25:53

There are porous tiles. Some of these most beautiful Italian tiles are quite porous, and if they don't have a barrier behind them, it goes right through if your contractor didn't build the house right. I've seen many, many, many beautiful million-dollar homes with master baths that are full of mold. So just because you have a very nice home or a new home does not eliminate the risk.

Dr. Jill 26:14

Those plates or the ERMI test are not perfect. But it is one tool that we can use to get started relatively inexpensively. And sometimes, say a patient does an ERMI test and I see [a level of] 30 of chaetomium, gosh, I'm worried that that's an issue. I can then say, "Get an inspector to find out where that's at." I'd love to hear: Is that similar to your approach to those kinds of things in the beginning?

Dr. Sandeep Gupta 26:39

Yes, definitely. It all depends on where the person or patient is at. Also, funds often play into this in a big way, of course. And as you said, to start with, even broaching the conversation is sometimes a little difficult because the way we've been taught in our culture to think about mold is mainly at a cleanliness level. Sometimes people can almost take it as if you're questioning their cleanliness when you bring up mold.

So you need to sometimes take a different approach, as you say, and start asking more tangential questions around whether people felt unwell in certain homes.

Dr. Sandeep Gupta 27:15

If we establish that there appears to have been a history of water-damaged buildings and there's been a correlation with symptoms, then when people come in with diagnoses such as chronic fatigue syndrome, fibromyalgia, and so on, this part of the history has never really been teased out, especially if you have enough time for a consultation. As a functional medicine doctor, we often take a lot of time for our consultations because some of these little points take a little while to tease out. And the person may have never thought of it before. "But actually, you know what? That house I was living in—that's where I started to get unwell. And yes, it did have leaks." How many times have you heard that?

Dr. Jill 25:55

Yes, all the time. It's like the 'Aha!' [moment] during the interview. You're like: "So in 2018, you moved, and ever since then you have not felt well. And your daughter and your son have both had chronic sinus issues since then. And your husband has brain fog."

Dr. Sandeep Gupta 28:09

Yes. It's like the light bulb goes on when this line of questioning is pursued, and it's like: "Hang on. Now that I think about it, yes, I was unwell in that. That's when I got unwell, and yes, there was a leak there, and there were some musty smells," and so on. And it's like: "Okay, so this new place, have you then moved the furniture with you and everything that you own?" "Oh yes, we just took everything with us." So you can understand, then, that that's why we've got ongoing activation of the inflammatory pathways. Often, in those cases, just doing an ERMI test or a plate test could be a reasonable place to start.

Dr. Sandeep Gupta 28:45

In some cases, just doing some simple do-it-yourself remediation work can be a reasonable place to start. For instance, if you have any porous goods that have come from a contaminated house, then you need to either wash them if they're clothes or scan them and dispose of them if they're papers. Or just dispose of them if they're things like fluffy toys, lounge suites, and mattresses. Unfortunately,

although in our movement we're exploring ways that we may be able to salvage some of these items, at this point we don't have any reliable means for porous goods, and you've just got to dispose of those. Then the non-porous goods, which are generally metal, glass, hard finished wood, and so on—you can generally clean those using a damp wipe and a HEPA vacuum cleaner.

Dr. Sandeep Gupta 29:36

Sometimes, just after doing all of those things, you can then go ahead and repeat the ERMI or the plate test and see if you're starting to get to the realms of there being a reasonably clean house. Or is there still some contamination there?—which may lead us to have to go and get an IEP for this new house, in any case, because most homes unfortunately have some form of structural water damage to them. That's the bad news here. So in many cases, there are still going to be some underlying issues that need to be addressed. And getting an IEP who's really familiar with chronic illness due to mold will be really beneficial because they know how to look deeply.

Dr. Sandeep Gupta 30:21

They're not going to just come in and tap a few walls and spray a bit of essential oil. They're going to actually come and do a comprehensive examination. They need to be doing moisture readings and moisture mapping of the house. Ideally, infrared cameras can be very helpful. And then they'll take a very thorough history, just as we do when we're assessing patients. A similar thing applies to an assessment of a home. They need to have a history of where any leaks may have occurred and to look at those areas with a much more thorough eye, if you like. And then, often, sampling is the last part of their assessment, where they may do air and/or surface, and/or ERMI testing and then further elucidate what problems are in the house.

Dr. Jill 31:11

Yes. What a great overview. And there are now virtual [groups]; I know we both belong to the ICI group, and that's a great resource. It's the International Society for Environmentally Acquired Illness—ISEAI.org. There are IEPs like Michael Schrantz, Larry Schwartz, and Greg Weatherman that do virtual [consultations] so they can look in. And sometimes they're just advising you to have boots on the ground; they call it the 'boots on the ground people' that might come in. And again, this can get expensive, so you can start with small things.

Dr. Jill 31:45

There are a couple scenarios; one would be that you have moldy black *Stachybotrys* behind that wall. Most molds are not visible, so just because you can't see anything does not mean it's not there. And the big thing [is that] before you do a lot of cleaning, you want to make sure that there's not some massive mold hiding somewhere, because no amount of cleaning will take care of that issue. However, if it's just been an old house, you brought belongings from an old moldy house, and there aren't any massive hidden sources behind a wall, what Dr. Gupta is saying is that you could possibly get rid of porous items. Clean the ones that you can.

Dr. Jill 32:19

Usually I have patients do some fogging, then a fine particulate clean or a small particulate clean, and then clean the ducts. So you're getting a really, really thorough clean because the dust in the particulate from dead mold that's left behind can still trigger the immune system. This is the frustrating thing: Just because you get rid of the wet, bulk *Stachybotrys* doesn't mean what's left behind that contaminated the air can't still make you sick. This is why we have to deal with the patients who are in this environment and are often very triggered by it and even by the remediation.

Dr. Jill 32:50

So that's remediation. Let's dive into just little bits of treatment. Now, I want to say we're here to talk about your course. And in the last 10 minutes or so, I want to be sure to give you time to do that. So as you're listening, one of the reasons I brought Dr. Gupta on is [because] I believe in his work and his labor of love with *Mold Illness Made Simple [Course] 2.0*, right?

Dr. Sandeep Gupta 33:19

Yes.

Dr. Jill 33:12

I already put a link here; I'll make sure you guys all have that link. I don't know how many years you've spent, [but] you've put a lot of effort into this course, haven't you?

Dr. Sandeep Gupta 33:21

Yes. The original version was released four years ago. We probably started working on this, myself and Caleb, right around six years ago. This probably ties into the discussion we've been having, which is that often when people find out that, for instance, their home or workplace may be contaminated, there's a massive amount of overwhelm and a lot of anxiety. People can get stuck because it feels impossible to move forward. It feels like the expenses are never-ending. And to be able to then make the decision to remediate your house or to move, that's a really, really big one. And to be able to find a proper doctor or practitioner to be able to treat you, all of these little decisions just seem very overwhelming, especially when you yourself are not feeling well. Oftentimes, people's brains are just not really able to make decisions as well as possible.

Dr. Sandeep Gupta 34:22

Although there are some simpler things coming in now, originally a lot of the information that was out there in this area of mold was extremely complicated, in my view. And it's great information, but it's not necessarily the [kind of] information that someone with a really foggy mind is going to be able to understand. When we went through our physician training and so on, we were able to get through all of that. But if there had been an easier path for me, I would have much preferred to have taken that.

Dr. Jill 34:51

Like you said, 1:00 a.m. with TGF- β and MMP9, and [inaudible].

Dr. Sandeep Gupta 34:54

Yes, that was not the easiest path, the one that I took there. That was just like getting into all of these 100-page documents and then slowly trying to find a gem in there where, on page 99, it would probably explain a question I was looking for or something like that. But why not just go straight to the information that's needed? *Mold Illness Made Simple* is really just an attempt to do that. It's just an attempt to go straight to "This is what you need to know" and nothing else.

Dr. Sandeep Gupta 35:23

We first start talking about: What is inflammation? It's just a really simple concept. We've described it as a silent fire in your body. So just like the ICU patient who had

sepsis and was starting to get a few joint pains and some fatigue when they were back in the ward, even though the fire has been put out to a large extent, they've still got the embers of inflammation going on there. And that's why they're sick; they've still got inflammation. So it's the same thing with people who have had massive exposure to mold. There is a silent fire of inflammation going on in their bodies, and this relates to something called cytokines.

Dr. Sandeep Gupta 36:00

Cytokines are proteins that the immune system creates. They're like bullets, if you like, that the immune system is creating to try and eliminate foreign agents. But they're just not very effective in a sense. Really, what we need is a proper acquired immune response to take place. But that generally doesn't take place with people who have a certain genetic predisposition to mold-related illnesses. So instead, they get this chronic inflammatory response, and that can lead to symptoms in almost all systems of the body. As I say, that's what we explain in a lot of depth in part one of the course.

Dr. Sandeep Gupta 36:38

Then we go on to talk about buildings, because if you don't get your building right and you don't deal with that side, there's no use going and having treatment. Would you say, Dr. Jill? That's what we [inaudible].

Dr. Jill 34:48

Absolutely. Right.

Dr. Sandeep Gupta 36:50

It just doesn't work as well. So that's the real key. And as I said, we started to allude to some of the basic considerations when you're looking at dealing with your building. The first thing was to make sure that you found an IEP who is really properly qualified. There are also certain certifications that we go over, but they understand chronic illness due to mold. The second thing, if you decide to do remediation, is finding a remediator who properly understands CIRS and has proper methods for remediating the building that basically stand up to scrutiny. We also talk about questions that you can ask a mold inspector and questions that you can ask a mold remediator to make sure that you're getting the proper help.

Dr. Sandeep Gupta 37:39

I personally believe that even just for that little piece, the course is worth it because if you make mistakes in that whole area—for instance, if you just get someone around the corner from you who's just a general mold inspector but they've never dealt with chronic illness patients—most likely you're going to have to end up going and duplicating all the work you've done before. You're going to have to go and get another inspection. You're going to go and have other remediation done. It's best to just get it right the first time, and that's why it's so important to have the right information.

Dr. Jill 38:14

Yes, how many times have you heard patients come in who've had one, two, three, or four inspections, and they're all normal—"I don't have mold"—and then you find out there's a huge issue? Or even worse, "Oh, we had a remediation and I'm still sick," or "We had two major remediations and still haven't improved." That's sadly not the exception to the rule.

Dr. Sandeep Gupta 38:34

Yes, that's right. It's so common that people have had problems in this domain, and this can drag on for years and years and years. And during this time, you're depriving yourself of the opportunity to have a clean building and to have gotten better. So basically, having really good information about the proper qualifications of a mold inspector and remediator is really important, as is understanding what not to do.

Dr. Sandeep Gupta 39:01

One of the big things is that if you decide to move from a contaminated home, then you've got to treat your possessions. You can't take the contaminated possessions with you. As we said before, you've got to look at those porous possessions. Even though they may be very sentimental to you, you've got to deal with them in some way, even if that way is by putting them in a plastic box, sealing the box, and taping it up for a later time. That's still way better than just having them out in the air to then contaminate the new house. There are a whole bunch of considerations when it comes to buildings.

Dr. Sandeep Gupta 39:39

We also get into the treatment, which I think we're going to jump into a little bit now. So there's a whole bunch of different steps that are really important with treatment, but probably the most important one is binders, would you say?

Dr. Jill 39:54

I would agree. Yes.

Dr. Sandeep Gupta 39:55

Yes. Binders can be pharmaceutical or natural. In this version of the course, we really expand this whole area of binders and talk about all of the natural binders. We do talk about cholestyramine and welchol and how they can be used. But we also talk about bentonite clay and zeolite and the combinations that are out there, like Toxin Binder and Ultra Binder, and so on. And how you can use urinary mycotoxin testing in some cases to decide on the precise binders and detoxification supplements that you may care to use or whether you just decide to use a more generic protocol, which these days we generally recommend that even if you're using cholestyramine and welchol that you at least use one natural binder in there as well so that you're getting a more comprehensive scope and it's not just picking up ocratoxin. So we go into that in a lot of depth.

Dr. Sandeep Gupta 40:51

Then we talk about some of the other steps of the original Shoemaker protocol. Probably the most important one is VIP nasal spray, which for some people is still very, very useful. It doesn't help everyone, but for some people, it's just a real key. It's almost like a key just fits their door, and all of a sudden the inflammation just goes down majorly. And in other cases, it really doesn't have a major symptomatic effect. I guess that just shows how unique and different everyone is. The other thing we cover now is fungal colonization. That's a new piece that I've added to this course.

Dr. Jill 41:30

Oh, that's wonderful, wonderful. You're welcome to share some of the slides from your course, too.

Dr. Sandeep Gupta 41:38

Yes, sure. Let me do that. So let me just go ahead here and...

Dr. Jill 41:45

Perfect.

Dr. Sandeep Gupta 41:50

There we go. Okay. So really, I've covered a lot of this. We talk a lot about how water damage can happen to a building, but there are so many different ways. There can be microbial growth in a bathroom. It can be due to waterproofing or so many other different problems. So as we said before, you can decide to do a do-it-yourself test or have a proper professional inspection done. If it then indicates water damage or mold growth in the bathroom, and you've got a multi-system, multi-symptom illness, then all the signs are there that you may well have CIRS, or mast cell activation syndrome. So there are a number of tests you can do, and we cover all of those in this course. It's a much more broad view of the testing in this course.

Dr. Sandeep Gupta 42:36

We talk about the urinary and nasal mycotoxin testing and also the fungal stool testing, which is still available with various labs such as GI-MAP. We also talk about how you can do nasal fungal and bacterial cultures with Microbiology DX. And then we still cover the inflammatory and hormonal markers that can be done with Quest and Labcorp. If you've got an insurance plan that covers these tests, then, in many cases, that's a great idea. You can still have these tests done. And I think now, Dr. Jill, you're pretty much doing them all with Labcorp, is that right?

Dr. Jill 43:14

Yes.

Dr. Sandeep Gupta 43:15

Okay, great. But they can point to certain abnormalities. Particularly in a legal case, I've found that those tests tend to be very helpful. And then organic acid tests—that's a test that I'm using more and more when we talk about what some of the markers are on there that tend to indicate that you're colonized or affected by mold. And then we also talk about NeuroQuant, which is a very useful test if it's available in your area. We also talk about GENIE. So there are a whole host of tests that can be done. However, it just depends on your particular case and your particular budget.

Dr. Sandeep Gupta 43:50

I would also make the point that, in some cases, you can just get treated with minimal testing. You don't necessarily have to do extensive testing; you can basically know. If you're convinced and you understand the fact that mold is affecting your health and you want to basically treat your building and then go through a treatment protocol, in many cases, you can actually do that without a whole lot of testing. But on the other hand, and particularly in legal cases or in cases where you want more information, there are a whole host of tests available.

Dr. Sandeep Gupta 44:21

So just tracking back a little bit, I think we've already alluded to the fact that getting away from the water-damaged building exposure is the single most important step in getting better. And if you do that, you're halfway there in terms of recovery, generally speaking. The second thing, which I haven't mentioned here, is that if you have mast cell activation, it's probably best to address that first. Would you say, Dr. Jill?

Dr. Jill 44:48

Yes, absolutely.

Dr. Sandeep Gupta 44:50

Yes. So we could add an extra step here. So if mast cell activation is present, go ahead and treat that first with a low-histamine diet and supplements or pharmaceutical agents for that. And then, thirdly, get on to binders such as colostyramine, welchol, charcoal, clay, zeolite, chitosan, etc. And as I say, that can be generic or it can be according to your testing. And then the next thing is to consider whether you've got fungal colonization and/or MARCoNS colonization. And really, we were thinking of this in a more broad sense now, really just thinking about the nasal biome and not so much fixated on the idea of MARCoNS being the sole problem.

Dr. Sandeep Gupta 45:32

So we talk about some of the different agents that can be used, such as colloidal silver and/or EDTA, and antifungal medications such as nystatin or amphotericin nasal sprays. Then we also talk about how to treat GI colonization with fungus using

antifungal medications or herbs. And then, lastly, we talk about inflammation correctly, particularly in the area of neuro-inflammation. And there's a whole host of things that can be used for this, including fish oils, low amylose, or various versions of an anti-inflammatory diet—resveratrol, curcumin.

Dr. Sandeep Gupta 46:08

The limbic and vagus support—this is a really important area that I'm going to touch on quickly. And this is actually one of the longest lessons in the new version of the course. I think it's about one hour and 20 minutes. We cover all of the systems of limbic system retraining and methodologies for vagus system support. And this has come to my awareness more and more: This whole element of the limbic system needs to be addressed in cases of mold, or at least in many cases, it needs to be addressed. If you are able to add some limbic system retraining into your whole process, that actually reduces a lot of the inflammation on the neurological level, which will help your healing in a very great way.

Dr. Sandeep Gupta 46:53

So it doesn't mean that we're saying the illness is just in your head. Well, in one sense, it is. In one sense, there's an actual physical inflammation component in your limbic system of the brain. So it's very physical. And that's something that you can address with a very structured process for limbic system retraining. So there's DNRS, there's the Gupta Program, etc.

Dr. Jill 47:18

I will go as far as to say that everybody with mold-related illness needs to look at this because it's a trauma. And whether we like it or not, that mold exposure, even if we're like, "Oh, I'm going to be fine and I know I'll get well," even if you have a great positive attitude, you're well adapted, and you've done therapy, this type of illness is so different in that it actually attacks your limbic [system]. Some people call it the limbic loop. It's this limbic loop of fight or flight, so your subconscious, when you get exposed, is actually re-triggered every time. So you have to do something to kind of calm the system down and say, "Hey, it's going to be okay." This is through that limbic stuff you describe in the course.

Dr. Sandeep Gupta 48:00

Yes. Again, just for that chapter alone, I think the course is worth it just to really understand why limbic system retraining is recommended in almost all patients

with this illness and to also just look at the different options. There's DNRS, the GUTPA program, [inaudible]—there's a whole bunch of them. So we hope you look at the different options. We also look at somatic psychotherapy modalities for people who really want to dive deep and look at releasing some of the trauma that they've had from the past. So there's a lot of information in there.

Dr. Sandeep Gupta 48:36

And then we also talk about various other supplements you can use. We've talked about VIP. Synapsin is another type of nasal spray that's often used, which uses a compound called nicotinamide riboside as well as compounds from ginseng, which is a really, really ancient herb that's been used for a variety of things. Then we talk about vitamin D, lithium, lion's mane, and all sorts of different supplements that can be used to support the rebuilding of your neurological system because often there is some degree of damage that it caused to your neurological system. So there's a lot of information about this as well.

Dr. Sandeep Gupta 49:18

So jumping right into it, if that's okay, Dr. Jill...

Dr. Jill 49:20

Yes.

Dr. Sandeep Gupta 49:21

The course is now basically 17 hours, so it's increased from about eight hours. Basically, they're animated lectures with slides on the screen with my beautiful Australian accent. There are now nine modules and basically 30 lessons. It's not run at any particular time. It can basically be completed totally at your own pace, which I think is important for CIRS and chronic fatigue patients because sometimes you have to pace yourself in terms of energy. This way, you can choose when you have a day where you're actually feeling better, you have good energy levels, and you're able to take in information, because I know sometimes you have days where you're just not able to take anything at all. So it's totally done at your own pace. However, it's good to make a schedule of what sort of time period you want to do it on your own. I think it's really important that it's not for everyone. Really, this course is just for people who really want to take the time to learn [about] this illness and properly go through the information, perhaps over a few months time.

Dr. Jill 50:28

And Dr. Gupta, we had a question, as we're talking about: Is this for practitioners or patients? I'm hearing this is definitely for the patients, but I am assuming doctors who don't know anything about it—it would be excellent for them as well.

Dr. Sandeep Gupta 50:41

Yes. We've had that feedback so far. We've had a lot of practitioners, including doctors, do it. As I said, I would have thought that this is a much better pathway to learning about mold because, really, once you have those simple concepts down, we can easily add the more advanced medical information afterwards. That's not difficult, in my view. But I think the key, even for physicians, is to just get the really core, basic information down pat, like this bit about: How do you screen for CIRS? How do you diagnose CIRS? We'll cover that all in Part 1. I think that the information on water-damaged buildings is probably the harder information to come about. That's where we really talk about this idea of water-damaged building testing, the basics of remediation, and what would happen during a remediation process. Personally, as a doctor, I think I've found that that's been the information that hasn't been that easy to lay my hands on. I really had to go digging for a lot of this information, going into things like the IIC, RC guidelines, and so on.

Dr. Sandeep Gupta 51:51

Then lastly, how to just find and maintain a healthy home—again, that's information that's not readily out there and available. We've distilled a lot of information from a variety of different sources, including scientific papers and so on. All the references are also in there, so I think for a physician, they're probably more likely to go and then look up the references and actually download some of those references so that they have the scientific papers on hand. Basically, that's the way in which they can have a much more scientific form of investigation into this illness. But I think that the same information applies.

Dr. Sandeep Gupta 52:34

In many cases, I also find that physicians who are doing this course and are interested in it have someone they know or patients who may be suffering from this illness. So the practical focus still tends to be quite helpful for them in terms of some of the simple practical tips that we include. So yes, I would definitely say that

for a physician, if you're just starting off with this illness, I would say this is absolutely a very good way to go.

Dr. Sandeep Gupta 53:02

Then lastly, in the bonus module, which we included this time, in Lesson 1, we talk about how you can actually use biomarkers such as C4A and MMP-9 to determine whether you have a water-damaged building. What I mean here is that you can actually use them as a provocation test. We talk a lot about something called a mold sabbatical in this course. A mold sabbatical is when you get away from your building and generally go tent camping or go to a building that you know is safe for two weeks or more. Then you come back and re-expose yourself to the building that you're in again. All of a sudden, sometimes what happens is that you notice a correlation between your symptoms and that building that you never noticed before.

Dr. Sandeep Gupta 53:45

The other thing that you can add to this is that you can actually draw blood while you're away on the mold sabbatical for C4A, TGF- β , MMP-9, and so on. Then draw it again, maybe 24 hours after you re-expose yourself to the house. In some cases, you then see a big jump. That can be very helpful to confirm once and for all that the building is contributing to your patient's health. I think that kind of information can be very, very helpful, especially when you're having to make a decision on whether to remediate or move.

Dr. Jill 54:20

Remediate or leave. A little similar: I went to Maui last year, and [there was] massive mold in my hotel. Now I know what to do. It still made me a little ill, but I got through it pretty quickly. But when I got home a week and a half later, I did my C4A, and it was about 4,000. So, it was clearly confirmation that I had just gotten out of the mold there in Maui. So it's interesting.

Dr. Sandeep Gupta 54:42

Yes, that's right. So, there are a whole bunch of different ways in which you can use these biomarkers and some of the other tests. Then in Lesson 2, we talk about the psycho-emotional stress of mold illness and the trauma that people experience through it, and how limbic retaining and vagus nerve stimulation techniques can be extremely helpful as part of your recovery.

Dr. Sandeep Gupta 55:05

In Lesson 3, as a special interest area, we talk about CIRS and COVID-19 and the connections there, and we really put to bed this idea that CIRS patients are at greater risk. At this point, it doesn't appear that there's anything to suggest that if your CIRS is well managed, you're at greater risk of this illness. But we do talk about some preventative things you can do, including vitamin D, etc.

Dr. Sandeep Gupta 55:31

Then lastly, in Lesson 4, we talk about other causes of multi-system, multi-symptom illness. The other side of the coin here is that although we're saying that mold is huge as a problem for chronic illness—it's often the most overlooked thing and one of the most important things—we also don't want people to get so caught up in it that they overlook other important causes. So we also talk about things like SIBO, which Dr. Jill talks a lot about in her podcasts, and also pyrroluria, heavy metal toxicity, and parasites. These are just some of the things we think about every day with functional medicine. And it's important that we keep these in the greater net of our illness and don't just focus on mold alone. "Keep a broad net," I think, is a good way to put it.

Dr. Jill 56:20

Wow! This is absolutely amazing. And again, the first course was great. This is times 10 or times 100—the quality and amount of content you have here. And if you're listening live today, there's a link below that you can check out. There's also a code that Dr. Gupta has so graciously given us to share with our listeners, so you get \$100 off, which is quite a big deal for the course. I mean, this is just an incredible deal, Dr. Gupta. I know this is a massive amount of work with so much great information. And this is a great, great price for our listeners.

Dr. Sandeep Gupta 56:57

Well, I sincerely think it's worth it. If you're suffering from this illness, I think there's really no question because clear information leads to you feeling clearer. Feeling clearer leads to less overwhelm and less limbic system activation. Once you feel clear, you can gain some confidence, and then you can start to move forward. As I said, one of my heartfelt desires for the outcome of this course is that people may be able to use it to help move forward towards recovery.

Dr. Sandeep Gupta 57:28

That's really the intention behind it—that you can really feel that there's a path forward for you and that this is not the end, and that you realize that not only can you recover from this illness, but often there's a really big life shift that happens after recovering from mold illness. Often, there are a lot of different personal transformations and meaning that comes of this. And often, people find that the life they're living after recovering from mold illness is way more fulfilling than the one they lived before. I really mean this, and I have seen this in a number of cases.

Dr. Jill 58:08

Yes, I love that you say that. That's definitely my story. I'm writing my book right now, and it talks about some of the story, and that's actually a part called "The Awakening". There's this piece that happens that really, really shifted my life in many ways, and it started with mold-related illness. So I can relate to that on so many levels. Well, gosh, thank you for your time today, Dr. Gupta. This is just incredibly informative. I really encourage you, if you're through listening, to check this out. I think it's a phenomenal resource. And again, I know how much time, energy, and effort you've put into it. Any last comments or things that you'd like our listeners to know?

Dr. Sandeep Gupta 58:45

I think just reiterating this idea that there is a bright new world on the other side of this illness. When you're right in the middle of this, I think if someone had come up to me and said, "You're going to find amazing meaning after some point of this," I wouldn't believe them, or I'd tell them that they just had no idea how severe this whole thing was. Then you start making steps towards recovery, and you start walking in the right direction. All of a sudden, you find that all of the things that you do start compounding.

Dr. Sandeep Gupta 59:21

I really also want to tell people, if anyone's being caught up with this idea that they have the dreaded gene or that unless they find a perfect house, they'll never get to recovery, to let go of some of those ideas that were really floating around in the mold world some time back. Really, one of the key messages we're mentioning here is that it is possible for everyone to recover. Even if it's difficult, even if it means living in a tent for a little while, there is a way forward. I want you guys to take that in and really feel that there is a solution here, and you're going to be able to find it.

Dr. Sandeep Gupta 1:00:01

One of the keys is to find some really good, clear information, so this course is here as an option for you. If you want to do it, as we say, you just need to go to the website. Dr. Jill will also post a specific link below on the Facebook page. You can just go in and click on 'Sign Up' and use that coupon code where it asks you, "Do you have a coupon code?" That's going to run for the next 48 hours or so. I really want people to be able to access this information, so we've made it very affordable. I really hope that you consider this option and hopefully benefit from it.

Dr. Jill 1:00:38

Yes, well, thank you for getting up early on that side of the world and joining us this morning—this afternoon for us. And for us in the US, if you haven't gotten out to vote, I just want to encourage you. You still have a little bit of time to do that today. Thank you so much, Dr. Gupta. As always, it's a pleasure to have you on today.

Dr. Sandeep Gupta 1:00:56

Thanks, Dr. Jill. It was great talking to you, and I look forward to doing another call some other time.

Dr. Jill 1:01:02

You got it.