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Balancing Hormones and Managing Menopause

Anna Cabeca, DO

Mary Clifton: Hello, everyone. Welcome back. I'm excited to share with you an interview today with Dr. Anna Cabeca.

I'm going to read you her extensive and very impressive bio. Anna Cabeca is an internationally acclaimed menopause and sexual health expert, global speaker and pioneer, particularly in the promotion of women's health. She graduated from Emory University and is triple board-certified in gynecology and obstetrics, integrative medicine, and antiaging and regenerative medicine.

She's the author of *The Hormone Fix*, a book about holistic lifestyle programs for menopausal women. Her areas of specialty include bioidentical hormone treatments and natural hormone balancing strategies. And she's received extensive notoriety for her virtual transformational programs, including Women's Restorative Health, Sexual CPR, and Magic Menopause.

She created the successful and popular vulvar cream for women, *Julva*. In her spare time Dr. Cabeca hosts the highly regarded series *Coach Talk*, featuring compelling podcasts focusing on a wide variety of important health and wellness topics.

She was named the 2018 innovator of the year by Mindshare, the number one conference for health and wellness influencers, and was also honored with the prestigious 2017 Allan P. Mince

Award, presented annually by the Age Menopause Medical Group to the most outstanding physician who displays clinical excellence in entrepreneurship.

Dr. Cabeca has reached hundreds of thousands of women around the globe, inspiring them to reclaim their optimal health and realize that they can journey through menopause and find more purpose and pleasure than they ever dreamed possible.

She balances her passion for women's health with faith, grace, and skill while raising her daughters and leading the nonprofit foundation she created in honor of her son, Garret V. Bivens, who tragically died as a toddler. Dr. Cabeca infuses her presentations with humor, raw connection, and passion. And she impacts lives each and every day. Follow her journey at her blog drannacabeca.com. And connect with her on Facebook, and Twitter, and Instagram. Dr. Cabeca, thank you for joining us today.

Dr. Anna Cabeca: Wow. It's great to be here with you. Thanks for having me.

Mary Clifton: It's an interview I'm really looking forward to. For years before I moved into thinking more about CBD, I used to work in osteoporosis and women's health, and spoke, myself, nationally around the country for the various drug companies.

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So often people are focusing on menopause as a decline in their life when it really can be seen as a time of great success and expansion.

Dr. Anna Cabeca: That is so true. It really is a period of discovery, an age of discovery, an age of wonder. Because I really understand that transitional time periods in our life lead to another level of experience.

I mean, let's just take, for example when we start our periods, right? And then maybe when we have a baby. And then now menopause, menopausal journey, and this transition. It is a mandatory transition. But suffering is optional. And I think that's really something that I want to be clear that we do not have to suffer through menopause.

We do not have to bear with it. We do not have to struggle and power through. So many women have told me that is what they do. In fact, Mary, just recently, I was visiting a dear friend of mine in Holland, in Amsterdam, well outside of Amsterdam. And she is exactly my same age, which is so cool. We were born on the same day at the same time. Just different countries.

Mary Clifton: Oh, wow.

Dr. Anna Cabeca: Yeah. And I met her 33 years ago. And we've maintained a friendship. So, I was just there this last week. And we sat and talked. She confided in me. She said, "Anna, I went through menopause at age 46. And I go to the doctors here, and they just tell me this is normal. This is how it's supposed to be, and just bear with it. It'll get better."

And she was struggling with weight gain certainly. Struggling with the loss of intimacy. Vaginal dryness. Discomfort with sex. Just feeling like irritable and not herself, basically. And I hear that a lot, "I just don't feel like myself. I'm not the person I want to be and know I can be. I'm not enjoying my life. I'm not joyful."

I said, "And your doctor didn't offer you anything?" And she said, "Just to take your vitamins, try to get some sleep, and recognize that this is just normal."

And I'm angry because obviously it's a worldwide problem. And that answer is something that many women have heard. And it's a worldwide problem. We're struggling. Our lives are different. Our lives are hectic. We're working well past menopause. And transition is a challenge. And we don't have to suffer, bear with it. And I was 46. She's my age. So, she's 53 now.

Mary Clifton: Oh, my word.

Dr. Anna Cabeca: So, she's been struggling for seven years without resolution. So, I offered her like... I had no answer. And this is part of my story, Mary, as you know. I had no answer going through early premature menopause with an early diagnosis of infertility. I had no answer when I was struggling with vaginal dryness in my 40's, and lack of sex drive, and intimacy.

I had no answer for myself or my patients that was natural, and acceptable, and essentially risk-free. And so that's why I created some of the things I created. So, I said, first of all, read my book. You've got to read this, right? Because it takes more than hormones to fix our hormones. We are designed in this transition to shift the way we use energy.

And that's critical. And that's part of my Keto-Green way of doing things. And then here are some nutrients and herbal supplements, a combination of eastern/western wisdom to help you balance your hormones, detoxify your body, support your liver and support your microbiome — microbial diversity.

So that is key for healthy hormone balance. So that's in my product Mighty Maca Plus, which has these different ingredients, an adaptogenic

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formula. So that's part of it. And then using, we're so afraid of bioidentical progesterone. Well, shouldn't be. We're so afraid of the word "estrogen." And we shouldn't be. It's a feminine. It's our female selves.

And we're so afraid of using things. So that's why I created the products that I created, was to help have these tangible solutions and provide the knowledge, the empowerment around it to really set us off for a much better stage in life.

Now, I'm 53 with an 11-year-old because the early diagnosis of infertility, permanent and reversible infertility, I reversed it.

Mary Clifton: It's such an exciting story where you build on very early trauma and create really amazing outcomes from it. And it just speaks to the fact that not all doctors are capable of doing everything. And something that every woman experiences, menopause, you would expect most doctors to have their hands around. But it really does take a specialist. It's a very complicated situation, the withdraw of hormones. And it affects every woman differently.

I'm really excited to hear more about your thoughts and your conclusions around shifting in the energy balance at the time of menopause.

Dr. Anna Cabeca: Yeah. So, this is where it's a hormone-dependent. And it's noted to be an estrogen-dependent phenomenon in our brain to use glucose for fuel. So, gluconeogenesis in the brain is an estrogen-dependent phenomenon.

So, as our ovaries start declining in function, late 30s early 40s, our estrogen levels are starting to decline. But really our progesterone is declining first. This is where many women start to experience the PMS, the mood swings, the irregular...

So, we see the gynecologic sometimes. I'm

a gynecologist. So, the irregular periods, the irregular bleeding, the heavy, painful cycles, and breakthrough bleeding. Things like that that bring you to the gynecologist. But they are in concert with symptoms of irritability, difficulty sleeping, depression, PMS, that sensation of hating your husband, but only two weeks out of the month. So, it's typically your hormones, not your husband.

Mary Clifton: Is it exclusive to just your husband?

Dr. Anna Cabeca: Yeah. No, definitely not. No one is immune.

Mary Clifton: I can attest to that.

Dr. Anna Cabeca: Maybe our pets are, so it's a real issue. The thing that I recognized is the importance of progesterone for brain health. And again, progesterone is needed to produce estrogen and extra stress. Well then, we are going to make more cortisol.

Well, that progesterone's needed to make cortisol. So, we have those normal reproductive hormonal decline, we're a little bit more stressed, life is more crazy. We really start to empty our tank of our reproductive hormones. And this affects our brain's ability to use glucose for fuel. So that forgetfulness, "I don't remember your name."

And also, worse, the feelings of isolation. The feelings of lack of ambition. Lack of joy. Feeling like you've lost your edge. These are hormonal issues. But if we switch our fuel source. The change of our fuel sources from using glucose to ketones in a healthy Keto-Green way, which is different.

There's Keto-Dirty, and there's Keto-Clean, which is Keto Greens. So, I emphasize, and I talk about that in my book how to do that. But when we switch from using glucose for fuel to ketones for fuel, that is not hormone-dependent that we know of.

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So, here is an undeniable fuel source. And as long as we've got some ketones going, right now, I checked my blood ketones this morning. I've got 0.6, but heck, I'm above .5, which is nutritional ketosis. So, I'm good. I just got back from three-week holiday. So, I have to quickly up my ketosis level. Get my brain clear again.

But that really makes a difference. And again, the keto alkaline approach is the Keto-Green way that I talk about this, is adding on those alkalinizers which we need for a diverse microbiome, for healthy hormonal detoxification, and nutritional bone support as well.

And so that's the whole concept that we put into play for hormonal balance during this transition. And women's hot flashes stop within two weeks. They start to lose weight that they have been resistant to lose. They feel more energetic.

And for me, I call it energized enlightenment. I'm getting in the peace, the sense of peace that surpasses all understanding. We talk about that in the Bible. The peace that surpasses all understanding. To be able to feel that despite the storm going on around you, that has changed my life, and the way I mother as a single mom. As a single business owner. As the sole provider for my family and my employees, right? So that has changed the way I live my life tremendously.

Mary Clifton: That's such an exciting story. There's so many different places to think about. The Keto-Green and the ability to have the energy back. The ability to control the symptoms of menopause. And especially with managing the microbiome. Because I'm 100 percent with you with alkalization to promote the growth of the proper bacteria, if your gut is acidic then you're going to grow some pretty unhealthy bacteria around that acid. Does the alkalinity also help to restore normal vaginal and urinary function?

Dr. Anna Cabeca: It can really improve urinary

function as well. Just from the cell membrane function. So, for me with urinary health, there's a few things that I recommend. It's the healthy fatty acids to improve cell membrane. And getting an alkaline diet.

If we are prone to urinary tract infections actually to increase Vitamin C to 2000 international units a day. Sometimes higher. And if it's because we have the changes from hormonal decline, using something like my topical product, *Juval*, which has DHEA in it and plant stem cells from the alpine rose to help recondition that tissue, to rejuvenate that tissue.

And that's where I've created a product that does not have DHEA or emu oil. A product that has hemp in it to also help women and men, actually, with vulvar and vulvar changes, atrophy, and also anal fissures. Keeping the perineum healthy. Use a very clean, essentially sexual moisturizer. But that has other health benefits, as well.

Mary Clifton: I love that idea. Because so often when you're looking for a great lubricant, it's got some silicone in it that I'm just not excited to use this close to all of these very important organs. Like my ovaries. So, finding a water-based lubricant that's a good lubricant is difficult. And I'm very excited about the addition of the hemp products.

The CB1 receptors located widely throughout the nervous system, but the CB2 receptors are located all over the other body tissues. Really in every body tissue in very high concentration in the uterus, surprisingly. But in the whole area of female sexual health where there's inflammation or chronic irritation, the body's going to just naturally upregulate these CB receptors. And naturally upregulate the presence of the endocannabinoids that the body produces from its own lipid stores.

So, having a product that helps to stimulate those

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CB2 receptors locally tends to be extremely well-tolerated and very effective. So, I'd love to hear more about this topical product you're creating.

Dr. Anna Cabeca: Yeah. Well, because of out of necessity, in my *Juval* cream, which as DHEA and plant stems, also emu oil, coconut oil, and shea butter. That's a combination. But we can't export to Canada because DHEA is prescription only in Canada.

And so, from that and also because of a very strong vegan population in my group, we're opposed to the emu oil. Again, the reason I put that in there is because I use that in compounding hormones for women with vaginal dryness or prolapse.

And prior to surgery, I was prescribing testosterone suppositories and using emu oil, which I experienced in New Zealand and had a, actually Australia, and almost fell off of a mountain. Cut my leg. They had recommended this product to help healing and decrease the scar. I have no scar whatsoever.

So, I started using emu oil in my compounding formulas to help women with these issues. And it really does okay make a difference. But with this in mind and also being conscious of this, and also the DHEA issue, I created this product with sea buckthorn oil. And it uses pracaxi oil, which is from a Brazilian tree that has tremendous healing properties. And also, the hemp oil.

So, this combination of ingredients also with my other base ingredients from *Juval*, combining this product to really help the pelvic floor for both men and women. And also, the issue as we get older. So many people are dealing with hemorrhoids and anal fissures.

And no one talks about this. They're like, "Use Preparation H." Is that all we have? I mean, seriously. It is honestly, and it's terrible.

Mary Clifton: It is. It really is all we have. And having a more natural product that's going to work better and really work to control the inflammation at a much more natural level. Using the ECS, as opposed to just hitting it with a bunch of steroids, and then causing the skin thinning. I mean you get symptom relief immediately, but then I think so often the symptoms get even worse a week later.

Dr. Anna Cabeca: Absolutely. Absolutely. Right. It creates a flare, a rebound oftentimes. So, we need to heal it from the source. Decrease inflammation, improve cell membrane integrity, and that makes all the difference in the world. Keep us comfortable.

Mary Clifton: The thing I love about all of these products that you're creating is that you're harnessing all of these God-given plant products that are so strong and effective to help support human health and happiness.

I don't think that we were ever destined to be put on this Earth to be miserable and suffering until we finally are allowed to pass into eternity. I fully think that we're here to enjoy our life and to be as comfortable as possible. And as happy as possible.

And I love the way that you bring all of this health and wellness through natural means to your audience. And now to mine. I really appreciate your time today, Dr. Cabeca. Thank you so much for working with me today.

Dr. Anna Cabeca: My pleasure, Mary. It has been working with you too. And thanks for doing this and getting this information out to the world.

Mary Clifton: Oh, you're welcome. And of course, people can find you at drannacabeca.com. And your products are on there. Everybody's going to want to take a look at this lubricant and this healing product for men and women.

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And you also are giving away a free bonus so people can look in the information connected to our talk for your bonus gift, which is just so incredibly generous and wonderful of you as usual.

Dr. Anna Cabeca: Well, my pleasure. Yeah. And it's an eBook on orgasm and intimacy, and that whole concept of things I talked about with the dryness. If we have pain every time we do something, why would want do it first of all? So just comfort is a really big issue. And it's a worldwide issue that we're powering through. But part of this is understanding what's happening to your body, and how to improve, improve orgasm no matter how old we are, improve that intimacy and connection so that we can really revive our relationships and even just within our own body that we're feeling of that sexual energy.

That is really magnificent and really helps us love our passions. If we are single, that artistic passion, creative passion, our professional passions, and our family passions.

Mary Clifton: Absolutely. I do think it's very important to close, to realize that this is a worldwide problem. And a very serious problem for women. There still is not a quality, really in most places. I've read that in various cultures there really aren't even words for menopause, or hot flashes, or a lot of the symptoms that women deal with because they just aren't relevant enough to create language around them. And that makes me so sad when I know so many women who do have the capacity to talk about it and get treatment in our country that suffer with this.

This is definitely a serious problem that needs more attention and more focus. And your work is more important now than ever. Thank you, Dr. Cabeca.



Everything You Need to Know About CBD Laws

Joy Beckerman

V. Capaldi: I couldn't be more excited than I am today to have someone here who has been changing lives for a quarter of a century regarding the Cannabis and Industrial Hemp Movement. She is the president of the Hemp Industries Association, the Vice President of the U.S. Hemp Authority, the Executive Vice President of the U.S. Hemp Round Table, the Regulatory Officer and Industry Liaison for Elixinol. She's the principal of the Hemp ACE International, a consulting legal support and expert witness firm. She's the co-founder and senior advisor of the Colorado Hemp Works. And she's my hero and good friend, Joy Beckerman, who is taking time out of her busy schedule to talk to us about everything that we need to know about hemp, advocacy, regulations, and everything.

So, thank you so much, Joy, for being here and taking time out of your busy day. I'm honored to have you here.

Joy: V., it is such a pleasure and a privilege to do this work for you sister. You are a light to the Hemp Movement. You are a light to this Public Health Revolution that we're experiencing all over the world.

V. Capaldi: Thank you for your kindness. I appreciate that. So, the first thing I want to ask you is how did you get started in this world 25 years ago? Like what brought you to this special place?

Joy: Actually, at a Grateful Dead show in Foxborough, Massachusetts in the spring of 1990. I received a flyer with some excerpts from a book that had been written by a man, Jack Herer, may he rest in peace, and edited by Chris Conrad and who was still going strong with Mickey Norris. It's an amazing power couple called, *The Emperor Wears No Clothes*. It's had several additions since then.

But *The Emperor Wears No Clothes* is really the Bible in a way that started these cannabis movements in the mid to late 1980s. And understand that the U.S. government did not just want to eradicate the plant from our awareness and our conscious. The U.S. government wanted to eradicate all knowledge of the plant from our consciousness. So, all of these records through our magazines, through the agricultural records, everything, literally the Nixon Administration expunged all of it.

And so, Jack Herer, Chris Conrad, Mickey, and others knew that we had this deep rich history. They'd even heard about this film from 1941 that the USDA wrote called, *Hemp for Victory*. And they went on a massive, exploratory, research investigations combing the nation's archives in Washington, D.C., combing international libraries, national libraries. And they found, and this was before word processing.

So, we're talking photocopies, border tape, and

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glue. And they found all of these documents and put them all in book form. So, the first version is sort of this psychedelic mish-mosh of some great writing and columns. But also, all of these documents to prove indeed this great rich history of this plant that has all of these uses to serve all of the views of humanity. And to prove in fact, *The Emperor Wears No Clothes*, has been removed from our consciousness. And we are here to deliver it.

And I got that flyer, sister. And it affected me on a cellular level. Even as I tell the story today, and that was 1990. I have goosebumps as I'm telling you that story. It changed the trajectory of my life, the information that came to me. And it was really a harmonic convergence of planetary healing and justice because I didn't realize that we had a pathway in the form of cannabis, in the form of hemp. I thought we were on our way to destroying the Earth and killing each other. But we should do so with peace, love, and music in mind while we were on the path of destruction. And for me to have realized that day, there is a path. The path has been criminalized by the U.S. government, which was also instrumental in criminalizing the plant globally. And we can turn this around.

V. Capaldi: Well, I thank you for all your hard work in reading that, going to that concert, and realizing that you wanted to be a part of this. Now recently in America, the Farm Bill has been passed. So, that would lead a lot of us to believe that smooth-sailing, yay, we won. But I think there's still a lot of work to do. Could you sort of give us some input into what's really happening legally in the United States?

Joy: Certainly. I mean, whenever there's a new discovery or a revolution of some kind, in industry, in healthcare, or in agriculture, nothing is ever perfect when it first rolls out. People need to learn about it, right? And certainly, we're coming from a plant that has had a very successful social

engineering campaign. Decades, deliberately, decades long. So, for us, the challenges are multiplied. Because we're talking about a crop that we are trying to deliver from hysterical prohibition into common sense law, policy, and regulation.

And so, there were two things. One, it's new. No piece of legislation or regulation is ever perfect when it comes out. And two, we have the issue of our cousin, marijuana, adult use and medical use cannabis, and what all that means. So, on top of it, when I say that the hemp plant is here to serve all of the needs of humanity, when we talk about regulations, it's not just for a widget or for a dietary supplement. We're talking human and animal nutrition, nutraceuticals, pharmaceuticals, body care, paper, textiles, bio-composites and resins, building materials, industrial sealants and coatings, energy and fuel, nanotechnology, biomedical applications. It's going on and on. So, we are talking about regulations for a number of industries. In fact, every industry that humans and animals and the planet need to survive.

Currently it's CBD, of course, cannabidiol, that is attracting so much attention. And while we have been shouting from the rooftops for some 30 years now just about the environmental benefits of the plant if we choose to use it with regenerative agriculture, and how we can improve every area of industry to make superior products.

Keep in mind this isn't just a plant that "works." The bio-cellulose in that stalk of the hemp plant is the most valuable bio-cellulose on the planet Earth. We're discovering that it has surface area and tensile strength, second only to graphite and carbon nanotubes. And those materials are cost prohibitive just to perform research and development on. They say nothing of making products that mere mortals like you and I can buy on the shelves of department stores and grocery stores.

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So, every piece of it is useful here. But while folks may be receptive to, “Oh wow, we can improve building. We can make superior products and superior textiles that don’t off gas and that don’t need to be bleached. We can make paper we don’t need to poison the water table with dioxins,” and while that’s a motivation there and can be inspiring, the difference with CBD is that folks are nervous. Or they have some pain from exercising, hiking, or they have having some sleepless nights for some reason or other. And they take CBD and it solves that problem for them. They are able to sleep. They are able to experience a pleasant day instead of an anxious day or nervous day. They are able to relieve that pain or that soreness that they got from exercising or something like that. And now they’re really paying attention because we solved that immediate need.

So, through this awareness of CBD, which hit us all like a ton of bricks about six years ago. You know, I was in this for oil, seed, and fiber. And then hemp extract and CBD came along. And I almost feel on some spiritual level that the plant was like, “Okay, it’s not going fast enough. Let’s hit them with hemp, CBD, and get this thing rolling.”

And certainly, that is what happened. So, the CBD is creating the awareness of these other many, many uses of the plant. And in fact, the trillion dollar industries of the plant, which are in oil, seed, and fiber. And also, generating the revenue to create the infrastructure to process the long strong stalk, which we love to process. Of course, we love the fact that it’s long and strong before it’s harvested and processed. But getting to harvest and process that stalk is its own challenge.

So, how is the FDA then handling this amazing property that has been delivered to us? Well, you know, the FDA has been saying for four years or so, that it is a violation of federal law to market CBD as a dietary supplement or a food. And they have a reason to say that. We of course, the informed position of the industry itself, through

FDA lawyers and very fine scholarly lawyers, are that it is actually not the law, that is the guidance position of the FDA. I will unpack that in a moment.

But the reason why they have been maintaining this statement, that it is a violation of federal law to market CBD as a dietary supplement or food is because of something called the I-N-D preclusion. That is the Investigational New Drug preclusion. And that’s located within Section 201FF3B of the Food, Drug, and Cosmetic Act. And to boil it down, in layman’s terms, it basically means if a substance or a compound has not been marketed as a dietary supplement or a food prior to the date that someone puts in an IND Application for it—an Investigation of New Drug Application for it—then as a statutory function, a mechanical function of the statute, that same substance then can no longer be marketed as a dietary supplement or a food. It’s just a statutory function.

Well, when GW Pharmaceutical applied for Epidiolex, which is a cannabis derived CBD isolate, a very refined, pure form of CBD, where they just isolated the molecule of CBD itself. It doesn’t have any of the other cannabinoids, terpenes, flavonoids, or anything like that in it. But they applied for that IND, according to the FDA, that started the clock ticking. That CBD had not been marketed as a dietary supplement or a food prior to this date and/or prior to the Dietary Supplement Health and Education Act. That is something we call, DSHEA, in short. It is the acronym for the Dietary Supplement Health and Education Act, which is also a part of this.

So, they put on their website about four years ago, the FDA, and it’s been up there for four years. It is a violation of Federal Law to market CBD as a dietary supplement or a food. Those industry leaders have been aware of that for quite some time. And yet, we’ve driven a hemp extract truck right through the hole of reality because the



FDA has not yet entered in the Federal Register, something called either a Final Agency Action or a Final Determination. And this position that they've taken, that it is in violation of Federal Law. It has not been tried in the courts yet.

Now, if they were to file a Final Agency Action or a Final Determination, then they would have a much stronger position. Then they would say, "Okay, now we're really saying this is how we're going to deal with this. And it's a violation." And we would have a little bit more of a challenge. But they've not done that.

And in fact, they've only issued 23 warning letters to CBD companies since February of 2015. And when you consider the hundreds and hundreds of brands and companies that are out there. Now, those were warning letters. They were not cease and desist letters. They never resulted in corrective action or discipline of any kind. They were warning letters. Most of the results of these warning letters were the companies who received them came into compliance.

And what are we talking about? Compliance with what? So, I will unpack for one second, that we have beautiful regulations in this country. The code of Federal Regulations for the manufacturer, marketing, labeling, and packaging of dietary supplements. As well as food. And as well as cosmetics. And those are all covered in the code of Federal Regulations for dietary supplements. It's 21 CFR 111. CFR is Code of Federal Regulations. For food, it's 21 CFR 117. And then labeling laws are in 21 CFR 101. So, they are all there.

And you cannot, particularly if you're marketing your product as a dietary supplement, keep in mind, whether it's from a dandelion or whether it's from a cannabis plant, the FDA does not differentiate. You have to follow laws. And since you're not an approved drug, dietary supplements basically can make no claims at all.

And in fact, it's why you heard me say a moment ago, nervousness instead of anxiety. Anxiety is a disease state. Nervousness, occasional nervousness is not. Insomnia, I didn't say that. Insomnia is a disease state. Occasional sleeplessness is not. Inflammation, that is a disease state. But occasional pain from a strenuous exercise routine or a hike on a mountain is not. And this is very clearly written and delineated.

So, most of these 23 warning letters that I just talked about were around this mislabeling and this branding. Making medical claims that are not lawful to make. And so, the results of many of those warning letters were, "Okay, we'll stop making those claims. We'll come into compliance with those labeling laws."

So, we understand then with that full picture, no matter what an op ed from a former commissioner of the FDA, congressional testimony by the FDA, the FDA FAQ that's up on the web for four years, or all of those things, they are not law until the agency does something more. Like a Final Agency Action or a Final Determination. What they are is a guidance position. The issue is that State Departments of Health and State Departments of Agriculture are not quite as bold as the industry.

And so, while we sit here and say, "Hey, our lawyers tell us that this is just guidance FDA. It's not the law," State Departments of AG and State Departments of Health say, "Well, you know what? That may be true. But the FDA is God to us. And we don't want to get into trouble with the FDA. And so, we're going to go with what they're saying. So, you're not allowed to sell dietary supplements or food and beverages with CBD added to them in our state."

Now, only a few states have these types of issues. But the problem with the FDA continuing to ring that bell, it is a violation of Federal Law to market

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CBD as a dietary supplement or a food. The fallout of that is fairly untenable. You have every part of the supply chain and distribution chain asking, "What the heck here? What can we do? What are the transportation laws around that?" So, these are some of the challenges that we're dealing with. The FDA, of course, had their public comment period between May and July 16th. And that wasn't just on CBD. That was on cannabis and cannabis derived products. They were asking for data and scientific research.

And this is because the FDA has not moved by strong feelings, really strong opinions, or even video evidence of a child suffering from insanely violent epileptic seizure and then is administered CBD and to watch that seizure stop and for that child to experience relief. They need data and scientific research. Not videos, feelings, and opinions. And so, that's what they're asking for.

And thank you prohibition, she said sarcastically. We've had some trouble with research. And we're getting a larger and larger bank, particularly as the Farm Bill passed. The 2018 Farm Bill passed here. And so, they know that they've gotten their marching orders from Congress to create a regulatory framework for hemp extract, for all cannabinoids, and for cannabidiol specifically to be able to be sold as a dietary supplement or a food for the American farmer to be able to take advantage of this incredible opportunity and to participate in this Public Health Revolution, and for everybody in the supply chain. And most importantly, for the American consumer that is demanding access to CBD as a dietary supplement or a food. They've gotten their marching orders to create that framework.

And the Gallup poll came out last month. And that's a pretty famous poll. And it said, 1 out of every 7 Americans is consuming CBD right now. So, this is a very tall order. And there was some bill language right now. We will see how things are changing rapidly. So, maybe we have to update

this interview. But as it stands today, there is language that's been added to the Senate version of the Appropriations Bill.

And for those watching, every five years, the U.S. Federal Government has to pass a Farm Bill. Every year, they have to pass a Budget Bill, which is sometimes called an Omnibus Bill. Sometimes called the Consolidated Appropriations Act. But what it really is in layman's terms is a budget, an annual budget. It's the one darn thing that the Congress is tasked with every year. It's the one job they actually have to get done. And yet it's the one thing, every year, that we hear, "Oh, they can't agree. They're going to shut the government down."

Because since it's the one thing that they have to get done, it's the currency with which they trade, barter, and frankly extort each other with throughout the session, through the sausage making process, which is legislation. So, a lot of weird things get tucked into those big thousand page consolidated Appropriations Acts because there's a lot of, "Well, I'll do this, if you do this. And if you add this to the bill, I'll support this amendment." And the House creates their own Appropriations Bill. As does the Senate. And that same thing happens with the Farm Bills, which are every five years.

And then the House and the Senate appoint various people from each chamber. And they create what's called a Conference Committee. And then, they have to get into a room, roll up their sleeves, and work with each other to reconcile the two different bills, the House and the Senate, to come up with one bill that the Conference Committee can then deliver to each of the Chambers. And say, "Hey, we rolled up our sleeves, we've been working with each other for hours, late night sessions, this is what we came up with to reconcile the two bills. And this is what we want to vote on, on the floor."

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And so, Senator Mitch McConnell, and as we often say, “You might have 99 problems with Mitch McConnell, but hemp ain’t one.” So, he has added some language, and it gets a little complicated. And I don’t want to get too mired here. Because there’s so much for us to talk about. There’s bill language. And then there’s something called report language.

And what we would really like to see is language in a bill. Because the bill becomes the statute. The statute is the law. Report language doesn’t really hold that same weight. It’s saying, “Well this is how we intend for this to be carried out or implemented. Or this was the legislative intent of this provision in the bill.” So, he’s added report language to direct the FDA to create, while they’re creating this regulatory framework, which I think could take three to six years and we don’t have three to six years. It’s too untenable.

He says, while you’re creating with that regulatory framework, come up with an enforcement discretion. An enforcement discretion is the authority that the FDA has. And by the way, going back to that IND preclusion, the Investigation of New Drug preclusion that we talked about earlier, they actually also have authority within the statute to break their own rule. The FDA has the authority to say, “Hey, just because Section 201 FF would otherwise result in the inability for CBD to be marketed as a dietary supplement or a food. We’re going to go ahead and use our authority to override that. And make the decision that it actually can be.” They can do that under the statute.

And they seem to be considering using that authority, which is very good. But in the meantime, they could make something called an enforcement discretion, which says, “Okay, we’re going to allow this to go on while we figure out this regulatory framework. The enforcement discretion might include limits.” Such as something that we tend to call slim lane. What

is the FDA going to consider to be a drug with the CBD? In other words, what is the purity and potency that they might consider a drug? This many milligrams? And maybe an isolate? Versus what will be the purity and potency for a dietary supplement? This many milligrams? This kind of purity? Maybe it’s not an isolate? Maybe it’s an extract?

And then for Food and Beverage, and by the way in FDA world, we say Food, it includes beverage. What will be the milligrams for that? They are not real hip on food or beverage right now, the FDA. They’re definitely focused on dietary supplements. But they want more data over long time use, particularly with people with a liver impairment, particularly with contraindications with other drugs.

So, see, with the dietary supplement, there can be, this is your recommended daily allowance type of thing or a suggested serving size. But with food, it’s not that way. We could make a can of chips, so to speak, that have, you know, 20 milligrams of CBD in them. But who’s going to stop me from eating 15 cans? And those are the issues that the FDA deals with.

But if they could come up with an Enforcement Discretion, even just for dietary supplements—but we really want them to do it for food as well, food and beverage—that would give us some breathing room. It would give investors, the supply chain, the industry leaders really leading this industry, the Elixinol’s of the world, some breathing room to move forward, create safety, create comfort within the States. Again, these poor State Departments of AG and State Departments of Health, that feel as though they are at the mercy of the FDA, while we’ve got the industry and the American consumer saying, “Hey, I trust this company.”

And hopefully, and I’m certain that there’s somebody else who will be addressing of course,

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what consumers need to know about quality and safety before they buy with this incredible CBD Summit that you're doing, V. And so, I won't belabor those points. We will stay with law and regulation. But you know, what consumers need to know before they buy, once we've got those CGMP facilities, meaning they're certified with current good manufacturing practices and Certificates of Analysis and Transparency, all the way with that compliance. Let us move forward with this industry, building it, reinvigorating the American farm, the small family farmer. Reinvigorating the manufacturing, the wholesale, and distribution supply chain. Let us do that.

So, we hope that the House will adopt this language and that it will make its way into law. Hopefully coming out of report into bill language. The other challenge there, keep in mind, is that you can sign the FDA with a task. But it takes money and resources for them to deliver on the task. So, right now, Senator McConnell has asked for \$2 million to help them create the regulatory framework. Yet it will cost more like \$16 to \$20 million to create the regulatory framework. So, it challenges every step of the way. But meanwhile, one foot in front of the other, look how far we've come. So, we are well on our way. This genie is not going back into the bottle.

And when you're ready, I'd love to talk some more about the Farm Bill and what it did.

V. Capaldi: Well, that information is the most amazing explanation about how the system works. So, let me ask you a question. When you hear something like that and you hear about sort of the back end, how it works on the back end. It was a lot of risk for a lot of these companies and a lot of these farmers to say, "You know what, we are going to do this. And hope that legislation, I guess, follows up." I mean, I have goosebumps all over my body thinking about how this has been.

Joy: The risk.

V. Capaldi: For people to do this. And even before the Farm Bill, I was actually at a hemp event in San Diego in January. Was it January? No. It couldn't have been January. It was in May. I met a female hemp farmer. And I said to her, "How long have you been growing hemp?" She said, "Since the Farm Bill was signed." Wink, wink, you know. And I, wink, wink, back. And she said, "I've been producing hemp oil for a while because of people in my community with epilepsy."

And here was a woman, you know, I broke down and started crying and hugging her. Why do you think this product has been vilified? Why do you think all these records were destroyed? And if it wasn't for Jack Herer and his team doing what they did, gluing and pasting and whatever, do you have a thought on this?

Why has CBD and hemp been vilified, when we know that what it can do for regenerative soil? What it can do for epilepsy? What it has done for me, I have used cannabis for the treatment of multiple sclerosis for 32 years. Because I had involuntary limb jumping that I could not control, which made me not be able to drive. Not be able to use my limbs. And the only thing that helped me was cannabis.

My mother was an opiate addict my whole life. It took her life. I'm 57 years old. I still am battling with the scars of having an addicted opiate mom. So, for me, I look at opiates and then I look at my relationship with cannabis of 32 years. And it's nowhere near what my mother's relationship was. And then I look at, I drove around America in a van for four years and saw soil and our crops being destroyed. And yet, we know that hemp can regenerate the agriculture and the soil. Why do you have a thought on this, Joy?

Joy: I have lots of thoughts on it. And it's a lot to unpack. I can do it quickly here, I think. One, I just want to make sure we realize, that hemp is actually a very hungry crop. So, in Canada, where

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they don't have the greatest soil, for example, they're already up to 200 pounds of nitrogen per acre as a fertilizer. And they haven't hit maximum yield yet.

So, I apologize that we shouted from the rooftops in the 90s that hemp grows anywhere. It doesn't take water. It doesn't take inputs. And none of that is actually true unless you are already growing in beautiful soil. And there are beautiful soils. In Holland, for example, where they have beautiful soil, they're not adding nitrogen. And they are like, "Oh, that's horrible that in Canada they are having to add nitrogen." They have more nitrogen soil.

If we start to implement these regenerative agricultural techniques, then hemp breaks up the pest cycle. We don't have to use tillage. Tillage is just like a tornado coming through a town when we are talking about breaking up the very delicate, complex, and vibrant ecosystem of soil ecology. And as we know, if not for the top six inches of the soil, the rain, and farmers, we would all be dead. I mean, literally we cannot survive without the top six inches of soil, rain, and farmers. That's why we're alive.

So, it's so very important. And there are many aspects of the hemp crop and adding it to the rotation and implementing regenerative agricultural techniques, like cover crops and so on and so forth, that will absolutely build the soil, heal the soil, increase the bottom line for the farmer, and create even superior products with a higher nutritional value, so on and so forth.

But keeping in mind that if your soil is poor, you're going to have to fix it. And add those nutrients. And there are ways to do that regenerative agriculture. Alfalfa, Red Clover, legumes, planting them will fix the nitrogen in the soil. And the cover crops, of course, also protect the soil and retain moisture. And it's just a beautiful cycle.

So, when we talk about 2014 Farm Bill and 2018 Farm Bill, how did that change what happened in 1937? When we go back to why was it vilified? I will get a little bit spiritual here. And there will be folks who watch this, who will just think, "Okay, she's gone off the rails." I'm actually pretty secure on my rails. And the spiritual side, it serves me very well, I can assure you. So, what I'll say is, two things were happening in the 1930s. So, 1937 was the Marijuana Tax Act, which taxed and regulated hemp out of existence. It wasn't until the 1970 Controlled Substances Act, the Nixon administration, where it became a crime to cultivate the hemp.

But what was happening in the 1930s, better living through chemistry was happening. In the late 1800s, also, keep in mind the cotton gin had been invented. And there is a wonderful book, *Kentucky Fiber Wars*, that Dr. David West wrote that really described what happened in the U.S. Senate and U.S. Congress during that time with special interests, these fiber wars, and the cotton gin being invented. Keep in mind, cotton produces a very short wheat inferior fiber. It takes a ton of water, a ton of pesticides due to the boll weevil being its enemy. So, we had the cotton gin, I like to call sort of one prong. Another is, of course, became the wood pulp paper making process had been invented. And a patent was earned for that.

We also then had synthetic polymer, petroleum-based plastics, nylons, and other things being invented. And a patent was created for that. We also had by 1925, five pages of cannabis preparations in the U.S. pharmacopeia. But didn't really have a full understanding of how that works. So, there weren't patents on those medicines. But in 1927, they figured out how to extract salicylic acid from the Willow plant, Willow tree, Willow bark. That created an analgesic, the first aspirin, which was the real first serious competition for these cannabis medicines. And they understood how that worked. And could make a patent for that.

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So, what we start to see is patents, once you make them, pay the money for them, and go through all that, then you need to make sure that they're taking over the industry, if you are a capitalist. So, there were multiple special interests involved that led to a very successful decade long, social engineering campaign to demonize marijuana. And they used, even that term, and the Spanish spelling of marijuana, that is the term that is our legally defined term in the Controlled Substances Act. And in the Marijuana Tax Act, not cannabis.

And in Jamaica, for example, their legally defined term is ganja. Not cannabis. But for us, that was all part of this nefarious technique. Because I'm trying to reclaim the word marijuana for everybody. Because we're offending our Spanish speaking brothers and sisters by frankly re-racing the word. It's a very sacred word. Its etymology is really rooted in agriculture as a seven leaf plant. So, there's a moment out there that because of these special interests back in the 30s, use the term marijuana nefariously, that we should now demonize that word. And I say, "No, heal that word. Reclaim that word. Shout it from the rooftops." Also, because hemp is cannabis. I'm over people calling marijuana cannabis when hemp is cannabis. It is very confusing to the intellectuals in the room.

And there's 10 intellectuals watching this right now going, "I'm an intellectual." Yes, it's true. You are. But it's all cannabis though. There's marijuana and there is hemp.

In any event, additionally, and here's where the spiritual side comes in. It's possible that hemp knew that if it was just going to be another agricultural commodity with all the other crops, with as ignorant as we were not having ruined the planet yet or not having realized that we were about to start ourselves on a path that would damage the planet, if hemp had stayed around, it would just probably be the same old, same old. They would have big Ag'd it, ruined the soil with it,

so on and so forth. Maybe, it's possible, that while the special interest that we give so much power to and their conspiracy theories and all the power that they hold over us.

Let's consider for a moment, that the plant is more powerful and that the plant played them like fiddles and said, "I'm going to go underground for a while you guys figure out this better living through chemistry thing. And when you really need me again, I will have created this underground network not unlike the mycelial fantastic spongy network that we have in the soil. And it will be with people who are preserving the legacy and preserving the knowledge of what cannabis can do, meeting all of those needs of humanity, the planet, and animals.

And that network will work very hard to keep me around. They will risk their personal freedom. They will risk their parental rights. They will risk employment. They will risk bankruptcy. They will with voting rights. They will risk public shaming. They will risk any number of ills and consequences to make sure that cannabis stays in humanity and on the planet. And now, when we need it more than ever." Look, it's coming back with justice. Vibrant. And so, maybe that's why, I'm just offering it as a possibility people.

V. Capaldi: I love that. I agree with you. I think that is a fabulous possibility.

Joy: Because it's playing all of us like fiddles, man. I tell you, a flyer at a Grateful Dead show changed my life. I mean, once that hemp gets into your DNA, the knowledge, or the awareness of it, for most people it's just boom. And I meet people all the time, from all manner of industries: corporate, pharmaceutical, agricultural, machinists. They're coming out of retirement with the incredible wisdom, experience, and knowledge that they have. They are coming out of retirement to be a part of this agricultural, industrial, and public health revolution. It is a dream come true. It

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is exciting beyond anything that I could have imagined.

V. Capaldi: Wow. Well this has all been so amazing. And I've taken so much of your time already. And it is more than we ever could have imagined. And you know, I believe that life always provides for us. And all in perfect timing. And your story of the timing and that hemp just sort of said, "It's not my turn yet. And I'm going to come when the world is ready for me."

I believe that we are ready for hemp to come. And it's because of people like you and Jack Herer and a lot of the John Rollicks of the world and the people that have been fighting and staying true to the path. And I feel humbled that in my lifetime and in my healing journey that I'd been able to have hemp and marijuana be a part of my healing journey. Because if it wasn't for the valuable work that you've done, I wouldn't even be able to say that. So, from the bottom of my heart, I respect and honor all the work that you do, still to this day and have done. And I just really appreciate your time, Joy.

And I'd love for people to find out more about you. So, how can they learn about, what you would like them to learn about as far as you and the work that you do? And how we can all join together to support you?

Joy: Thank you so much. And it's just an honor, a privilege, and a pleasure to serve this plant. And as it is for you, amazing sister singing the song across the nation. HempAce.com is my website.

My speaking engagements are there at HempAce.com. And that's really the best way to get in touch with me is through that website. And Joy@HempAce.com is my email.

Also, I do host a podcast. Hemp Barons, a weekly podcast, which is a wonderful, I'm so honored to be the host of that show. And that's a great way to plug into hemp. And get current events on hemp. And also, to see what is up with me. So, that's the Hemp Barons Podcast on iTunes and Spotify.

V. Capaldi: And you're everywhere. You're speaking engagements, I looked at your list. At least 50 plus, just in this year. I mean anything, anywhere. So, you really can have access to the powerful words and learn so much from her. So, I encourage you all to really go to her site and see how many places she speaks. And where you can, you know, get in that audience and be wowed.

I was fortunate enough to meet Joy personally a year ago at a very intimate dinner. And seeing you many times since then at hemp industry events. And it's always a pleasure. And I thank you again. And I wish you a great week. And I know you're at an event right now. And make sure that you get back to all those people that are dying to see you.

Thank you so much, Joy. And namaste to you.

Joy: Namaste, V. Thank you, sister.



Holistic Approach to PANS/PANDAS

Elisa Song, MD

Mary Clifton: Hello, everyone. Today I am so excited to introduce you and probably many of you already know Dr. Elisa Song, just a leader in the pediatric community. I'd like to share with you her bio and then we're going to have a very fast moving comprehensive discussion on all things information in the kiddo brain. Elisa is a Holistic mama doc, Dr. Elisa Song MD, a holistic pediatrician, pediatric functional medicine expert and momma to two crazy, fun kids.

In her integrative pediatric craft is Whole Family Wellness which you can find at www.wholefamilywellness.org. She's helped thousands of kids to get to the root cause of their health concerns and helped their parents understand how to help their children thrive body, mind and spirit by integrating conventional pediatrics with functional medicine; homeopathy, acupuncture, herbal medicine and essential oils.

Dr. Song created Healthy Kids Happy Kids to share her advice and adventures as a holistic pediatrician and momma. Now everyone can have their very own virtual holistic pediatrician. You can follow her blog at Healthy Kids Happy Kids, which is healthykidshappykids.com or on Facebook at facebook.com/DrElisaSongMD or Instagram, [healthykids_happykids](https://instagram.com/healthykids_happykids). I'm so excited to talk to you because this brain inflammation, the idea of a hot brain and the way that cannabinoids could potentially be valuable in that setting is such an important topic.

Dr. Song: It's so important. And we have so many kids who are so sick and really need all the help they can get. And the more we understand about how so many of the neurodevelopmental and neuropsychiatric disorders that are kid are facing really have this underlying brain inflammation and immune dysregulation, I think we're going to find more and more how much CBD can benefit for a wide range of healing for our kids.

Mary Clifton: Absolutely. And the great thing about CBD and all the cannabinoids is that they cross the blood-brain barrier so effectively. You have all of your inflammatory cells in the peripheral nervous system, the macrophages and the B cells and T cells, but the brain has its own immune system through the glial cells. And it's sometimes very difficult to get those glial cells to respond to something that you're putting, for example, in an IV because it just doesn't cross into the brain very easily.

Dr. Song: So this is where really trying to figure out all the different mechanisms, whether it's acupuncture or restorative sleep or the cannabinoids. It's something that's really going to have a direct impact on the nervous system. We know so much about how the gut-brain system is connected and interacts, but we really don't know much about how can we penetrate that blood-brain barrier, which we know isn't completely sealed. We know there're many entry points for things like cannabinoids but also toxins and

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infections. But the more we can understand, how do we impact that brain directly, how do we help heal that brain, the more we're going to help our kids.

Mary Clifton: Absolutely. The blood-brain barrier thankfully is a little bit easier to penetrate in the setting of inflammation some of the gate ways become a little bit more open and that makes it a bit easier. I wonder how do you do acupuncture on a little squiggly person? I can't imagine how either one of my kids would ever sit still for that.

Dr. Song: Acupuncture is amazing. Most of us as adults if we've had acupuncture, we have this vision of laying on a table, right? Close your eyes and sitting there with some Zen music going on for maybe 20, 30, 40 minutes.

But for kids especially if they're under eight years of age, young kids, I've had babies where I've done acupuncture for colic and reflux symptoms. We don't retain the needle. The needle literally just goes in and out and so the whole session might be two minutes. And I'm on the floor with the kids and whatever part presents to me whether it's a foot or maybe it's a hand, I just go with the flow. And then there's also incredible other tools like laser acupuncture.

So I have a neuro red laser that I'll use for acupuncture points for older kids who're a bit nervous and maybe have had too many needles in their lives; they're a little shy and afraid of that. And I also have a little steam device which I actually have right in front of me. It's this one I use for ear acupuncture, it's amazing. These tools work incredibly well and children respond beautifully.

I mean children on the one hand, they can get so sick in an early age but on the other hand, they can also move back to healing so quickly. So that's where pediatrics is so rewarding. I mean just these little interventions and little changes in

their diet and their lifestyle and supplements and medications or tools like acupuncture, we can see these incredible shifts happening.

Mary Clifton: It is a very pliable system. Young people and pediatrics is often the care of the well. But with your focus on care of young people who are already experiencing chronic disease it's got to be extremely rewarding to see them turn things around quickly.

Dr. Song: Yeah. It's rewarding and it's disheartening how many of our kids have autoimmunity and inflammation nowadays. We need to focus on prevention. But in the meantime, we need to spread the message of all of these tools for kids who are sick so they're not really destined for a lifetime of these heavy-duty medications and immunosuppressants that they're facing.

Mary Clifton: Developing more autoimmunity and developing at a younger and younger age presumably due to all of these environmental factors because we can't see a genetic shift over the course of two generations.

Dr. Song: That's right. Our genes haven't changed but our ability to handle what we're being exposed to from an early age really is shifting. And reeducating that immune system from the newborn period even in utero towards one that's really holding on to inflammation and not able to get back. And that's where we're seeing autoimmunity in such young kids.

I used to think that my 18-month old child who had all sort of colitis was my youngest patient with autoimmune disease. But I actually saw a six-month old baby who was diagnosed with Crohn's disease. I mean how do you have a six month old baby with autoimmunity? Now thankfully she's doing amazingly well and she's in kindergarten and thriving.

Mary Clifton: Did you just knock on wood?

Dr. Song: I did knock on wood. She's doing amazingly well. She's thriving and she really has no signs of autoimmunity and that's what we want for our kids. Well, we actually want them to never develop autoimmunity in the first place, but it comes down to really their gut from an early stage is bombarded with all of these environmental toxins, medication at an early age. We know that antibiotic use and antacid use in the first six months of life can increase our risk for autoimmunity.

So we need to really figure out how to start from the ground up. Get momma's gut healthy so that babies are born with a healthy gut and then that imprinting and education of the immune system is primed to be healthy to deal with inflammation in a normal healthy way because we face inflammation every day. I mean we're encountered every day with something that our immune system needs to clean up whether it's an infection or whether it's some environmental chemical or toxin we're exposed to.

And if our immune systems are healthy, we should be able to go back to that state of health. We should be able to let inflammation do its job and then we should be able to let our immune systems say, "Hey, you've done your job, let's go back down to baseline." And this is where this counter regulatory balancing piece is not happening.

So inflammation just goes up and kids are staying there and we see that with kids' brains too. Kids' brains literally are on fire and these very common childhood infections like strep or influenza or the hand-foot-and-mouth virus instead of recovering and going back to a healthy happy baseline, these kids are tipping over into developing autoimmune brain inflammation or autoimmune encephalitis. And we're seeing this epidemic of something we call PANS or PANDAS.

Mary Clifton: And you know, it's so true on all those points; that we're constantly facing these hits of inflammation. And study after study showing that there is tiny DVTs trying to form in your leg, and cancer cells that are turning on in your body that have to be controlled and shut off every day. And so all of these regulatory systems need to be supported really hour to hour so that you have everything that you need to get better. It's just not a matter of taking a spa weekend for yourself once a year. It's something that needs to be supported every day.

Dr. Song: That's right. What I tell patients is, conventional medicine has a time and a place. Of course there's a time and a place for everything. But in conventional medicine, the only tools we really have are immunosuppressants, blast the inflammation and your immune system bring it down with things like NSAIDs, Ibuprofen or Prednisones, steroids. We don't have great tools in conventional pediatrics or conventional medicine to reeducate our immune system, to have that balancing regulatory piece.

And so what happens as soon as the Ibuprofen's off or as soon as the Prednisone's is off, inflammation goes right back up. So this is where I am fascinated with the research on CBD and how CBD can help with that balancing, that modulatory piece. And in fact with PANDAS which is a Pediatric Autoimmune Neuropsychiatric Disorders Associated with Strep, which many of your listeners will be familiar with but many will not. And we need to get the awareness out that this is an increasingly common problem.

But this is where children will become infected with strep, let's say in their throat or their skin and suddenly develop these acute onset of neuropsychiatric symptoms including rages, OCDs, ticks, food restriction, handwriting decline, slow comprehension, urinary frequency. And we know that the Th17 immune response is implicated in PANDAS and in many autoimmune

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illnesses that is just not being regulated well enough, and that CBD can actually help regulate the Th17 arm of our immune system. So I think that has so much potential there.

And then PANS too, PANS is an umbrella term; pediatric acute-onset neuropsychiatric syndrome that can be triggered by infections like strep or Epstein-Barr or Lyme or influenza. But then we can also have PANS triggered by other things like mycotoxins, mold, heavy metals, other environmental toxins.

Mary Clifton: I think as we go into a conversation more specific to CBD with kids and have to of course remind everyone that using products like cannabinoids in pediatrics is a very brave new world. It's not something that is supported by the obstetric association of family practice or internal medicine or the college of surgeons or the college of pediatrics.

However, the pediatric college did leave a crack in the door by saying that if you're dealing with a very significant disease that is not adequately controlled with current therapies or if you're dealing with a seriously disabling disease that you don't have under control, these products could be considered. And so that's an exciting crack in the door. And then the other exciting thing is the way that these cannabinoids appear to stabilize a lot of inflammation and really try to bring inflammation under control especially in the central nervous system. I mean this situation seems almost tailor-made for a trial of CBD or other cannabinoid to see if it helps with a hot brain in a little one.

Dr. Song: I absolutely agree that we are kind of in the wild west of knowing where to go with CBD, how much to give, the dosing is not clear. And for me when parents ask me, "Well, what about CBD for my kids? Which product should I use? How much should I give?" I have to be honest with them and let them know that I am not entirely clear on that.

And this is where I look to you, Mary, for your expertise to help guide my conversation with parents. Because as you know there's been this explosion of products on the market and I only want my patients to use the highest quality CBD products that are not going to be contaminated with mold. Because so many of our kids do have mold illness as well on top of the PANS or PANDAS maybe that's triggering. And of course want to make sure there's no other contaminant. So this is where I think your education here with your expert series and really bringing the education out to practitioners and parents is so critical.

Mary Clifton: I think finding the right product with someone you trust is very important and especially when you're working in a pediatric environment, making sure that the products are in a protected space and that you have a provider that has all of the poison control data and regular follow-ups scheduled. And has even potentially consulted a legal team just so everything is covered and that they're going to be okay. But with all of that said, CBD appears to be very safe in use of a number of situations. My recommendation always with inflammation or anything else is to start low and go slow and really start at a very low dose and spend at least a couple of weeks titrating.

In all of the studies that I've read where there is benefit and people enjoy a good result, they're giving themselves at least two weeks to slowly increase the dose especially in cases of like seizure disorder where young people who are dealing with recurrent seizures—some of these seizure syndromes like the Lennox-Gastaut, the Dravet syndrome—these kids are having a seizure every day or more than one seizure a day. A reduction in 50% of their seizures is really an outstanding result.

And we had six trials, now five that were very well done, randomized control trials that show significant benefit with the administration of just

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CBD to this community. So there is a definite benefit in an aggravated irritated brain. It's just a matter of accumulating a little bit more safety data around using it in little ones.

Dr. Song: I mean I think that this is as we move forward that parents can really look to hopefully more research and the benefits, potential adverse outcomes. And I have to say I haven't seen in my patients any adverse outcomes except perhaps initially some sleep disturbance which then settles out.

And so every child is so unique and as Dr. Mary said, we absolutely with kids go very slow and start very low because some kids will respond to even very small dosages. I think we also don't really know the long-term data. I mean just like for many things with kids the studies haven't followed them out long enough. But the results with seizures and devastating seizure disorders like Dravet Syndrome like Dr. Clifton mentioned where CBD has such potential to reduce the devastating impacts of the seizure disorder where in most cases medications really don't work.

I have kids whose medication list, they've tapped them out. They've gone through all of them and there's no other resources. So thank goodness there is a possibility for this other option but actually so many other benefits as well for kids with ADHD or autism or anxiety. And we know that 'mental health disorders' like anxiety and depression and OCD and ODD that we're seeing in kids, it's not just a mental health condition. There is so much underlying brain inflammation going on and we know that there's so much more evidence that even these mental health disorders are driven by inflammatory processes and infectious processes and toxic processes.

Mary Clifton: And oftentimes by different ways that they're going to impact different parts of the brain. I mean with autism that appears to respond very well to formulations to cannabinoid

formulations. There's one really nicely done study out of Israel of over 180 children that showed significant benefit with the addition of a cannabinoid formulation where kids could take some steps towards dressing themselves and much less aggressive behavior. And in ADHD no formal studies, but a lot of survey data where people report that they're feeling better.

And the functional MRI data the PET scans show that in that particular case it appears to be working the same way as Strattera or the Adderall, the other medications that we use in ADHD sort of to slow down the hyperactivity component. It seems to do the same thing with slowing down activity in the movement centers of the brain. Which makes sense because anybody who's ever been exposed to cannabinoids has had an experience where they just don't want to move because we're stuck to the coach.

Once you take a little person who can't sit down and can't settle down and give them an opportunity to sit down, some of that attention deficit component is really hyper activity. And once the hyper activity can be reduced then the kiddo can do better. But there's so many applications across these issues and also recognizing like you said. It's not just the little person, it's the care providers that are trying to manage the person and that are struggling with trying to provide effective care and maintain their patience and some really trying setting sometimes.

I think some of the most interesting work around the pediatric population is how many of these surveys are answered by a care provider in young adults or in adolescents. Because in a lot of cases with the Dravet syndrome, people are very seriously disabled with their conditions and are relying on a significant amount of care from day to day.

Dr. Song: Absolutely. And this is where I talk

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so much about momma self-care. And it's not always the mommas; there's poppas and many times grandparents involved but it's most often the moms who are up at odd hours of the night, researching what else can help their kids. Am I doing enough? What more could I be doing? And not taking care of themselves and living on adrenaline and not sleeping. And it's such a high anxiety state and so we really need to figure out ways to support our moms too. And I know moms who use CBD to help with that calming and that relaxation.

Mary Clifton: I was going to say we got some videos on that. It's so true.

Dr. Song: That's right.

Mary Clifton: In the adolescent brain I don't know if we'll ever get a straight answer on what's going on in terms of risk of psychosis or risk of the development of depression or any other associated behavior, mood disorders. We're never going to take 10,000 young people and put 5,000 on cannabinoids and keep 5,000 off and then follow them. We're always looking back and it's really difficult even with excellent science to remove all the cofounding issues like the parenting and the socioeconomic status and the educational level and whether or not these conditions existed before exposure.

But it appears that any substance exposure, any hallucinogen or alcohol or even nicotine can trigger the development of the psychosis or the depression in a vulnerable population. So really as we're looking to consider products like this, we really need to think about the vulnerability of the population, if there's a family history of these conditions or if the patient had a previous psychotic break or is already experiencing hallucination. Some of these things need to be taken into account as far as the appropriateness of therapy.

Dr. Song: That's right. And you know I just was having a conversation with another mother in the practice and there is this growing misperception among teenagers with all the benefits of CBD touted far and wide that it's completely safe for them and that vaping is actually good for them. So now, we're seeing so many news reports of death after death or serious morbidity associated with vaping.

So we are not talking about vaping here. We're talking about the therapeutic medicinal use of CBD for kids whose brains are inflamed and really could use that support. As Dr. Mary said, we really need to make sure, especially with the adolescent brain that is growing so rapidly and developing just as rapidly as their toddler brain was, that we are doing everything that we can during that critical time of neurodevelopment during our adolescent years. That we really give our children, our teenagers, the tools they need to develop their brains into a healthy adult brain that will be happy and thriving.

Mary Clifton: Yes, exactly. And recognizing that this is one tool in your arsenal and that there's all kinds of other products to use. And also remembering that the other medications that are being recommended through a more western model, the antiseizure medications or the other antidepressant medications, are not without their own level of risks and side effects in terms of their long-term use.

Dr. Song: Absolutely. I mean we are facing an epidemic of teenage anxiety and teenage suicide in the United States. In fact, teenage suicide is the second leading cause of death among our youth 15-25 years of age only behind accidental injury and that is the very top of the list. And then way down are the other causes of mortality in our youth. And so our children are put on a polypharmacy of medications, Lexapro and buspirone and risperidone. And there are so many side effects.

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In fact, antidepressant medications have what's called a black box warning that they may actually increase suicidality of our teenagers. The very symptom that we're trying to avoid and prevent. And so it really is about finding a good practitioner who can help you really integrate all of this and really follow along with your closely. Be a partner in your child's health and really be there to manage any side effects and also really help guide you towards understanding what are the risks and benefits of any intervention? How do we put together a plan that incorporates the best chance of healing with the lowest chance of side effects?

Mary Clifton: Absolutely. You know the idea with using the antidepressants is that you might get an improvement in the psychomotor component of the depression where the child just doesn't want to get off the couch, just too sad to get out of bed. But then they get healthy enough that they can get moving and actually move forward with a suicidal intent before you really clear the depression. There are risks with all of the different pharmaceutical medications. I could talk to you forever Elisa. And I know that probably listening now there are a bunch of other people who feel exactly the same way. So you have great data for us available at your website. Can you tell us again how to find you?

Dr. Song: Probably the best way for parents to learn more about integrated pediatric medicine is

through my blog. It's healthykidshappykids.com. And we have from there an amazing Facebook community of parents from all over the world that are coming together to really support parents in this holistic integrative journey. Because some parents don't have a community or friends or family who are interested in this.

Mary Clifton: I think that's exactly what Facebook is all about. If you're out in a country somewhere you don't have the resources, the therapy that other people might have and you most importantly don't have that community, that's so valuable. That's exactly what Facebook is for.

Dr. Song: It's amazing. And so if parents want more support from their fellow moms and dads and grandparents and practitioners and I'm in the group they can just look up Thriving Child Community Facebook group. And again, a great resource and I hope that moms and dads listening, grandparents and practitioners that you really become encouraged to take this forward into an integrative holistic functional medicine approach, whatever you want to call it. But looking at all the tools that we have at our disposal to help your kid's brain and immune system thrive.

Mary Clifton: Thank you, Elisa, thank you so much for all this great data today.



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