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Jay Davidson, DC, PScD
and Philip Blair, MD

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Cannabidiol (CBD) and Detox

Jay Davidson, DC, PScD and Philip Blair, MD

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Dr. Davidson: Hello. This is Dr. Jay Davidson from drjaydavdson.com. I'm excited to welcome this very special interview of The Detox Project. Today, my guest is Dr. Philip Blair, and we're going to talk about cannabidiol/CBD and detox. But before we do, let me tell you a little bit about Dr. Blair.

Col. Philip Blair, MD, US Army-retired, is a family physician providing disease management for small business employees in several states. He graduated from West Point in 1972, attended the University of Miami School of Medicine, and trained as an army family physician.

After medical assignments in three continents and the Gulf War and retiring from service, he delivered primary care above the Arctic Circle in Newfoundland. In 2002, he developed a highly successful approach to stop chronic kidney disease. He's a medical director at Pro Health Advisor. He provides disease management by telemedicine to clients in all states. Dr. Blair has researched and explored the use of cannabidiol for patients. He now provides medical consultation to patients and providers across the US, Australia, and UK.

Dr. Blair, I want to welcome you to The Detox Project.

Dr. Blair: Jay, thank you so much. I'm very excited to be here. I've got some great stuff to tell you. And there's some fabulous information that's coming out about cannabidiol and how it can work with the detoxification process.

Dr. Davidson: I'm excited to hear from you. And to be honest with you, Dr. Blair, the whole cannabidiol/CBD, which I want to dive into right away, a few years ago when I heard about it – and you're familiar with it long before that. But when I heard of it a few years ago, I was almost a little turned off and wanting to turn my face to it and not really hear about it. And the more I kept hearing about it, I decided to dive into and just got me excited and just in clarity too. We both recommend a type of CBD from Elixinol, and that's kind of how I heard about you as well too.

So, I guess just kind of diving into the interview, how did you become interested in cannabidiol?

Dr. Blair: Well, Jay, it wasn't that long ago that I got interested in cannabidiol. My background is a very contemporary physician going through all the training and following the rules and guidelines for everything that I did. But I was getting pretty disappointed in the standard therapies. They weren't doing what they were supposed to. In my chronic kidney disease program, I find that only a few percent – probably about 15% of

the doctors were really following the guidelines that were there. And for the most part, they guidelines were not nearly as effective as some creative and alternative therapies that were coming up.

So when I heard about cannabidiol and was introduced to it, I was already exploring, looking for ways to improve the care that was already being provided. And I was looking for innovative approaches and cannabidiol looked like it might be something worthwhile. I started doing the research. I used it. I applied it. I worked with hundreds of patients in using it and had a very high rate of success.

And with that high rate of success, I saw the potential of cannabidiol to really transform medical care in so many different ways. It is really phenomenal. So it's only been a couple of years, but I am constantly talking about cannabidiol, exploring it, and learning about it because there's always so much more to learn. It's really fabulous.

Dr. Davidson: Well, I love that about you, too. Because I feel like you, Dr. Blair, have such a great researcher mind and researching what's coming out in the science world. But also you have that clinician mind as well too, and to be able to utilize both those things, I think it's just really truly a gift.

So diving into cannabidiol, what is it? A lot of times I hear CBD. Is that

the same thing – the same name?
Can you describe what that is?

Dr. Blair: Exactly. Very simply, cannabidiol is an oil from cannabis, and we often call it CBD. It's an abbreviation. But actually, not too many people can say it properly. So CBD is a great way to start.

Well, there are actually two kinds of cannabis plants. There's marijuana and hemp. CBD comes from hemp. CBD can make you healthy, but it won't make you high.

Now, in addition, CBD is safe, it's legal, and it's highly effective. Now, it doesn't work in everybody, but the rate of positive responses is on the order of 75 percent. And even though it has these enormous benefits, I'm not seeing any reactions, no toxicity, and no interactions with any of the things that people are already doing.

Now, CBD works with our endocannabinoid system. And you might not have heard of that before. It's the master controller for all the body systems, regulating and fine-tuning all of the body to maintain health.

Dr. Davidson: So it's endocannabinoid system?

Dr. Blair: Exactly – the endocannabinoid system. This has got to be the greatest discovery of all time. It was actually uncovered in 1990. It's been there all along. And it turns out, that we make our own cannabinoids. We make our own substance that we call cannabinoids, and we have our own cannabinoid receptors that work throughout the body – in the brain, all the major organs, and throughout the nerves, and also the intestines.

It's so new that medical schools don't teach about it, and few doctors understand its role. But

from what we now know, it seems to be very closely involved with many diseases. Now, you may not have heard of the endocannabinoid system, but you've actually had references to it before.

Now, we talked about the runner's high, and it's been said that this comes from the endorphins. But that's not true because endorphins cannot pass the blood-brain barrier to get into the brain and have any effect. But the cannabinoids do.

Now, breast-feeding and suckling reflex, those are part of the endocannabinoid hormonal stimulation system. That's why they work. Here's one other thing is, why are truffles the most valuable food in the world per ounce? Well, actually, it's because it stimulates and activates the endocannabinoid system. And guess what? Even chocolate has special effects on the endocannabinoid system.

Dr. Davidson: I knew there was a reason I like chocolate, Dr. Blair.

Dr. Blair: You bet. And so many people do.

Dr. Davidson: And so clearly, it would be the cocoa or the cacao of the chocolate that would stimulate the endocannabinoid?

Dr. Blair: That's a great way. That's a good product. And you get the pure substance there that's really working within the system.

Dr. Davidson: So backing up just a little bit, Dr. Blair, you mentioned cannabis. And that's what honestly, a few years ago when I heard of this, it kind of turned me away – "My god. I just don't really want to dive into the whole marijuana world." But if you look at marijuana, my basic understanding is marijuana has two main components – THC and then CBD or cannabidiol.

And correct me if I'm wrong, but THC is more like the hallucinogenic that's the illegal part of marijuana – legal in some states, depending on area. So hemp or like industrial hemp that has cannabidiol or CBD in it just like marijuana, but it doesn't have the THC. Is that correct?

Dr. Blair: That's right. So that means that hemp contains the cannabidiol, and it's going to make you healthy, but it's not going to make you high. There's no psychoactive effect.

Dr. Davidson: So in other words, nobody is going to get their door busted down if they're taking CBD from hemp. In other words, it's legal in all 50 states. There's no issues with it.

Dr. Blair: Well, actually, that depends on where it comes from. If it comes from marijuana, then technically it could be considered illegal because it might contain a certain amount of THC. But if it comes from organic hemp, then it doesn't have any THC in it and it really can't be detected by most normal means.

Dr. Davidson: Great. So in other words, if the CBD comes from hemp, then from a legal standpoint, that's completely legal then.

Dr. Blair: Exactly. That's why some companies are able to import it from, let's say, Northern Europe, and bring it in and ship it to their production facility where they divide it up and put it into individual doses.

Dr. Davidson: Awesome. In the CBD world, this is something that people can get even like over the counter. They don't need a physician necessarily to prescribe it obviously. This is more like in a supplemental realm?

Dr. Blair: Exactly. It does not have to be prescribed. It does not require a doctor's permission to do it. Although, if you're taking it for a serious condition, I recommend that you advise the doctor that you are using it. But there is no requirement for posting it. You don't have to have a card. And many stores are offering it more and more as a matter of fact.

Dr. Davidson: Awesome. That's great. So this is The Detox Project, and I wanted to really bring you in, not only because of your expertise in CBD and cannabidiol, but even its relation with detox. It seems like the more I keep reading and hearing, and the more conversations I even have with you, Dr. Blair, the more research keeps pouring out on CBD and cannabidiol.

And I'll tell you my personal opinion – I almost feel like in 10 years, CBD or cannabidiol is going to be in the same camp that vitamin D is now today. Like it's very accepted – vitamin D this, vitamin D that, affecting genes and all this. I feel like in 10 years, with the way research is pouring out, that we're going to be in that camp for CBD, accepting and understanding how many big benefits.

So how does CBD really work with our detox? Or how can it turbo-charge detox treatment?

Dr. Blair: Let me just say one other thing about the endocannabinoid system. What we're finding out is there's quite a bit of disease related to it. And when the endocannabinoid system gets off balance or out of control, then it creates what I like to say a dysfunctional endocannabinoid system.

We've got drugs to treat a low thyroid and drugs to treat a low adrenal cortisol. But we don't have anything that we know of that's actually treating the

endocannabinoid system, and CBD may offer that.

So when we're talking about detoxification, now I don't do that personally. But I can fully understand what people are going through in so much of the detoxification and getting those toxins out of the body.

As I see it, there's kind of three phases and that's during the correction phase, the mobilization of the toxin, and then the elimination. And cannabidiol has some extraordinary properties to work on all three of those areas, not to mention the symptoms that come along with the toxic substance and why people are in the fix that they're in. In fact, that's probably the best place to consider.

When you're in the correction phase, you are running into difficulties. Typically the approach is to first of all, we got to stop the toxin whatever that is and the infection probably has to be controlled. You're going to replace the vitamins, and you're going to replace the habits that maybe have gotten people into the problem. That's going to be with a good diet, pre- and probiotics, and other supplements are going to be going on like vitamin D. That's very important in a particular process.

But there's also a lot of symptoms. And sometimes you can't control those symptoms with standard medications or you don't want to because they may have gotten you into the problem in the first place. So what we're seeing with CBD is a reduction in pain and anxiety, and improvement in the brain fog and a calming of the gut. And that calming not only reduces the pain and the cramping that might occur, but it also improves the absorption of nutrients. And here's the wonderful thing about it – consistently I see improved sleep

from all of that process.

Now with regard to the detoxification, CBD is going to play a key role in restoring the body by correcting the endocannabinoid system in this situation. What do you think, Jay?

Dr. Davidson: I think the endocannabinoid system, that is a very exciting area of research as far as understanding it's link to causing disease and then looking for things that affect it. And it seems as if CBD would be in that camp – cannabidiol.

But I think of this, Dr. Blair. When clients that I work with, I would say top four systems I see – lack of energy, so fatigue; horrible sleep issues, which I think sleep and fatigue obviously hand in hand. If you're not awake during the day you don't sleep well at night. If you don't sleep well at night, you're not energized during the day. I would say anxiety is on top of that list. Another thing is pain. So basically, CBD has an effect on all those, including even inflammation.

And talk to me about improving absorption of nutrients. I've never heard that before.

Dr. Blair: Well, there's actually some pretty good evidence to show that CBD is working on the tight junctions that are going on in the intestines, as well as modulating the contractions that are occurring in the gut. So in people who generally have a slow gut, it is normalizing it. And people who are having problems with diarrhea, once again, it slows it down. This molecule has got to be the smartest one I have ever seen or heard of.

Dr. Davidson: Wow. So in other words, leaky gut or like you said, constipation or diarrhea, it helps to modulate. So it doesn't matter if you're too fast in the bowels or too

slow. It will help both sides of that aisle, in other words.

Dr. Blair: And the other part is that it's anti-inflammatory, specifically on the intestines. We're talking about the ability to reduce the inflammations in the intestines and even stop inflammatory bowel disease and irritable bowel disease. Those things, there's inflammation that is very closely associated with that, and cannabidiol can stop that process and restore the normal functioning. And if the gut is not inflamed, then it's going to do a whole lot better at absorbing the nutrients that need to be there.

Dr. Davidson: Wow, that's great. We have a speaker on The Detox Project that was talking about the gut health and how important it is. And I love one of his references. He said, "If you think of your skin, you have seven layers to your skin. And it's pretty easy to get a cut on your skin." But he said, "Your gut has one layer." And just to kind of throw how sensitive that is, having a tool that can obviously decrease inflammation at the intestinal level, I think is a great, great tool for the toolbox.

If you don't mind, can you dive into how does CBD actually work or cannabidiol work?

Dr. Blair: Well, I just want to touch on a couple other issues because they'll tie into how it's working. So in the mobilization phase, you're going to have toxin that's going to be circulating the body. You're going to get that rolling because you got to get it eliminated. When that toxin is circulating, you got a potential problem because you could have more damage that occur. You could have more injury to those normal cells that could be happening. And people can feel worse.

The Herxheimer reaction is essentially the mobilization of

those toxins, and some of those by-products that are going around. You want to stop that kind of reaction, and cannabidiol will do it.

Cannabidiol will protect those other tissues from those high exposures of toxins. There's plenty of literature that shows and has evidence of how CBD can not only reduce inflammation but prevent the toxic effects of ischemia and chemotherapy on all manner of cells throughout the body.

Dr. Davidson: Wow. And as you said, there's research to back this up. This isn't just your clinical opinion or what you've even found. It obviously backs up what you find as well too and your clinical opinion, but there's actually research coming out with this. What's your interpretation on my whole thing about 10 years from now? Do you think that it will be in that camp?

Dr. Blair: I think right on, Jay. I think that's what I would say as well. The process is going to be very slow because it's going to be a lot of non-belief. And we've got to get past the culture, the cannabis culture, which is that cannabis is very bad for you.

The government did a good job at propagandizing the cannabis and the dangers of cannabis that really hasn't borne out. And I think that that's going to take a while to get out of people's minds and memory. And you got to have get past the government and the laws and legislation. You're also going to have to get past the local governments that are trying to capitalize and take in increased revenues from high taxes. I know in Washington they just passed a law that's effective today that puts a 37% tax on cannabis products.

Dr. Davidson: Wow, 37% . I agree, Dr. Blair, because that's really where my mind went when I first heard of this. It was because I kind

of trapped in this marijuana issue. But really, it's not marijuana to talk about. It's the cannabidiol. It's the CBD which really can come from hemp.

So dive into how does CBD really work on a cellular level or really work with the body?

Dr. Blair: Well, in the body it works everywhere. It works every part of the body. That's why I was saying that CBD has got to be the smartest molecule in the world because – and this is kind of funny – it always does the right thing at the right time in the right situation. And that's because it's always restoring things to normal without excesses or extremes. And so for a lot of people, getting back to normal is a huge improvement.

Dr. Davidson: Yeah, it's so important especially when you're looking at detoxing. Like you said, it's always important to remove the source so you're not exposed to toxins or excessive amounts. And of course, you can't live in a bubble, so you're always going to have toxins but then to detox.

But detoxification can really be stressful on the body. So is it your opinion that CBD is a great tool to help people facilitate detox to kind of modulate inflammation to allow their body to not have flare-ups as much? Is that kind of what I'm hearing from you?

Dr. Blair: Exactly. What I'm seeing in CBD is a supportive system for the detoxification process. It's not going to detoxify in itself, but it's going to facilitate all of those good things that you're probably doing as a result of this process, and what you've learned at this detoxification summit.

Dr. Davidson: Wow. And I have to throw this out here. I work with Lyme disease clients. There's people that are suffering or have

symptoms of it. What's the effect? Let me just ask you that – what's the effect of pathogens with CBD. Is there any correlation with that?

Dr. Blair: Well, in many cases, we're seeing that CBD, there is evidence that it has a direct antibiotic effect on those pathogens. In fact, there is evidence for CBD working effectively on the spirochetes or the small bacteria that are associated with Lyme. So that's really good, and there's also good information with regard to other organisms. The common ones we see around us all the time – the staph and the strep bacteria that cause quite a bit of problem.

Dr. Davidson: This is unbelievable. It's almost as if CBD does too much. That's kind of silly to say that, but it's like it works on so many different levels. So what action does CBD or cannabidiol have if we're looking at cellular detox – so detoxifying the cells of the body?

Dr. Blair: Well, there's actually quite a bit. But I want to touch upon some of the other major categories before I get into the cellular area. And I want to make another point about the neurologic system in that what we're seeing with cannabidiol is a reduction in pain, anxiety, but an improvement in mood and an improvement in sleep and loss of that mental fog that is so much associated with a lot of the toxins and the problems that you're facing in your clinical situations.

Dr. Davidson: Yeah. I'm just making notes in our conversation because any time I talk to you, Dr. Blair, I just learn so much from you. You're such a wealth of knowledge. But improvement of mood – I was like, I figured all the listeners of The Detox Project right now, they're raising their hands, "Yes, please!" I think that's something that can definitely be an attraction to allow people open their minds up and try CBD.

Dr. Blair: There's great information in the medical literature about using it for mood and depression. In fact, the effects on depression are so dramatic because they occur immediately. Usually using an antidepressant drug, you might get better in about three weeks. This stuff turns around the mood in a matter of hours. There's these direct improvements.

Now there are longer term effects so keep up with it. You're not looking for a quick shot of mood improvement. It's not a euphoria, but it will return you to normal. And once again, normal is really a good thing.

Dr. Davidson: Heck, yeah. So dive into the detoxification. How does CBD really act upon our detoxification system or even our detoxing of the cells?

Dr. Blair: Well, in the immune system it's controlling the immune cells as well as the inflammation overall in the body. And so we usually think of within the cell and the inflammatory substances that are sort of leaking out from there. And CBD has an extraordinary ability to stop all the inflammatory cytokines, those chemicals that the immune cells that are secreting that cause so much of the recruitment of inflammatory cells as well as molecules and the swelling and the redness that goes along with it.

But it also increases the anti-inflammatory substances that come from the immune cell. So it's really doing a modulation. It's increasing and decreasing in order to, again, return the body to normal. And then the other part that's really quite fascinating is that CBD controls and it reduces the number of reactive immune cells.

And so that means that instead of recruiting more inflammation and more cells to recruit a larger and

larger swelling and redness and pain, it's reducing those cells and it's calming it down to a normal level. It seems to me that inflammation interferes more than it helps in so many situations that we encounter. And CBD has that knack about doing the right thing at the right time, especially with regard to immune function and cellular control there.

Dr. Davidson: So it can modulate immune. So in other words, like if you're to look at kind of branches of the immune system – the TH1, TH2, and the imbalance leading to autoimmune-type reactions – CBD has been shown to really help modulate the immune system then in that mechanism of...

Dr. Blair: Both of those. In fact, there's good evidence to show that with regard to autoimmune function, it's going to temper that sort of reactivity that's going on. Now if it's already going on, it may not be able to eliminate things like Hashimoto's thyroiditis. But it will reduce it so that it's not continuing on.

I see that inflammation is the perpetrator for a lot of these crimes. And there's constant inflammation that we have in our bodies from the toxins and from the diet that we take in. It creates a constant stimulation of the immune system that sort of generates these autoimmune things. As the body is trying to protect itself, it misidentifies some of its own tissues and creates immunologic reactions that have no business being there. And with cannabidiol, what we might be able to do is subdue those and prevent that kind of reaction from occurring.

Dr. Davidson: That's awesome. I'm thinking again of vitamin D. I mean you look at autoimmune cases and basically immune systems – TH1, TH2 – being in balance. At least this is in my clinical opinion, I think

there's very few things that will help balance no matter what side you're on, vitamin D being one of them. But now, I'm even more excited about CBD because I feel like that's another tool, basically what you're saying and research has shown.

Dr. Blair: Well, I think it very well could be. Here's a real interesting piece. I've got evidence here for the cannabidiol controlling the cortisol release of the body. So in stressful situations, it looks like cannabidiol is preventing high levels of cortisol, but it's also preventing low levels of cortisol from occurring. So it's really balancing out the adrenals to get away from some of these problems that we typically encounter, like the adrenal exhaustion and the hypersecretion of cortisol from anxiety and pain.

Dr. Davidson: It almost has then what some would call the adaptogenic properties. Whether it's too low or too high, it helps to bring it in balance then.

Dr. Blair: I think that's a great way to look at it.

Dr. Davidson: That totally makes sense because there's certain herbs like even in the adrenal world now I'm blanking on it. but there's certain herbs that help to bring the adrenals – if the adrenals are too fatigued, like stage 2, stage 3, versus maybe overproducing stage 1 cortisol – that they help to bring in balance, and CBD does this. That's incredible.

Dr. Blair: Well, I've tried to look at those particular receptors and think of the CBD as a drug, but it always fails because CBD is working for the overall benefit and homeostasis – the returning of normal of the cells. So in different situations, it's going to act differently.

A great example is within like cancer cells. So we get this total benefit of

CBD on all normal cells and normal tissues and protection against normal tissues. But in cancer cells, it actually induces inflammation and leads them to kill themselves.

Dr. Davidson: I don't even know what to say, Dr. Blair. I'm almost speechless, like it almost sounds too good to be true.

Dr. Blair: Oh, it does. And that actually becomes a problem because when it sounds too good to be true, then it becomes snake oil, and then it becomes unbelievable and people don't believe it. Personally, in my personal experience, in my family's experience with it and my close friends, I would not have believed it either. But I can see it happening right before my eyes.

Dr. Davidson: Yeah, you have an MD degree. You graduated from the University of Miami School of Medicine. You're a colonel, US Army-retired. You have amazing credentials, so you're definitely not the classic – probably what people would consider snake oil. And I think that's kind of where our minds want to go. It's like, "Oh, no. This can't be as good."

I mean I'm hearing this and obviously I've used it clinically with clients a lot in different manners and kind of experimenting with things. I see the research. I talk with you. I try to pick your brain on what's coming out and what you're finding in reactions. I remember when speaking with you before, I'm like, "I'm almost finding that I think it has this pathogenic effect on Lyme that somebody that's very sensitive or really in a hard spot with Lyme, that I don't want to dose it actually too much because I almost think it's killing off too many bacteria." And then that's when you're like, "Well, actually there's research coming out showing its effect on that." So it's like we keep learning more and more.

My mind sort of thinks though, Dr. Blair, really is this a tool that everybody can use? Who do you think should be using CBD?

Dr. Blair: Well, I think so. I think it's for everybody. But when we're talking about the toxicity that occurs with toxins and the detoxification process, then you can think of it especially for those people who are really having symptoms that are unresponsive to the usual measures that we have or toxins that are at real high levels or they're at high risk for those toxins causing further energy.

What about impaired organ function? You got to protect those organs, and CBD might be one of those things that could do that. In fact, I know it will protect the organs. It will protect the organs and prevent any further damage.

And then for those individuals who are really looking for maximal support and protection, I think CBD is an extra edge that can be there to help people through and protect them. They can have the confidence both at a provider level and at a patient level to make sure that they're going through the best process and the healthiest process that they possibly can.

Dr. Davidson: Wow. I found clinically I would say for the toolbox – because we all as clinicians establish a toolbox of tools and when to use what – I think anxiety, CBD is such a powerful tool. And I also believe, if there's massive chronic pain – I just don't know if there's a better tool out there. Now, coffee enemas, I found to be beneficial with pain and that's kind of what they actually found it for in World War I, when it kind of all got "invented" or started. But have you found the anxiety and pain, and CBD just being a massive tool?

Dr. Blair: Oh, absolutely. In fact, there's such an incredible information that's available and my experience verifies this, that in chronic narcotic use, when people are on a high levels of narcotics are able to reduce that medication by 75% . And they don't have tolerance to the drugs that they're taking, and they don't have dependency issues or addictive symptoms like cravings. They forget to take their medications because they don't feel like they need them at that time.

And then I haven't seen any withdrawal effects. So people will drop down drastically on their medications, particularly narcotics, and they won't have any symptoms that come from it. So what a wonderful tool.

At the same time, it does not enhance any risks to go along with the narcotics. It's a fantastic tool especially for people who are facing the problems that come along with narcotics, and that includes all manner of patients. Those in chronic pain as well as people who are facing cancer therapy. They need cancer control, but they don't want the constipation that goes along with high levels of narcotics. What a boon to the treatment and helping people through that particular thing.

Dr. Davidson: Yeah, what a rarity where you don't have to worry about the interaction of it. I find that amazing. Can you take too much CBD? It sounds funny to say this, but are there any addictive properties to when you're taking CBD if you're just going to stop?

Dr. Blair: No, there aren't. As a matter of fact, there's no increase in need for larger amounts. In fact, my experience is there's actually a decrease. As you get your body tuned up, the endocannabinoid system tuned up, it seems that it's

functioning better and you don't need as much in order to do the fine - tuning.

And when you're taking it at that point, it seems like you're just getting those special benefits that CBD offers in terms of the mental clarity, the energy and strength that comes from it, as well as some improved sleep. It seems like in our society that we're always facing demands on our sleep and penetrating into that very special time for healing. And CBD really helps along those lines, not only in removing pain that may be associated with minor aches and pains, but really improving the depth and the duration of sleep.

What we can see that studies are showing that CBD actually decreases the amount of REM sleep. That's the point where you're doing a lot of dreaming, and thereby if it's decreasing the REM sleep, it's actually increasing stage 4 sleep. And so people are reporting sometimes the same amount of sleep duration, but they're extraordinarily restful after that period of sleep. And so they're doing really, really well using the cannabidiol in just for that particular benefit.

Dr. Davidson: Wow. I didn't know that. I think sleep is one of those most "basic" things, but so powerful that if you don't sleep, your body can't heal. You sleep and your body can heal, which means everything basically we can improve. That's cool.

So just to clarify, I'm assuming you can take too much cannabidiol? It's just like if you drink too much water, or if you drink a gallon or two at once within an hour. I remember hearing - they have like a radio contest years ago and somebody did that and they passed away because they had too much water even though water is a necessity.

I'm assuming you can take too much CBD, or what's your take on that?

Dr. Blair: Well, not really. There's no toxicity. None has ever been found. There have never been any serious reactions to cannabidiol.

Dr. Davidson: Wow. That answers that.

Dr. Blair: Well, I want to talk about a couple of things because this is really important for everybody to know. I said that cannabidiol is really good for everybody, and I talked about those good things that it can do with regard to sleep and mental focus. And I just mentioned the chronic narcotics, but we really didn't touch about around the information that's coming out about cannabidiol related to epilepsy.

Right now, there's a couple of formulary items that are coming from the drug companies that are cannabidiol-based, and those are showing some excellent results in epilepsy. Kids that have been unresponsive to all manner up to 12 medications are showing a response to cannabidiol in reducing epilepsy.

Another area that I'm really excited about is Crohn's disease and inflammatory bowel disease. I'm seeing remarkable recovery in a matter of a few weeks from these devastating diseases, where people are facing the removal of their colon entirely. And yet, I'm seeing a reversal in such a short time and the calming of the gut.

And then one other that I'm just going to touch upon is Alzheimer's disease. Alzheimer's and the neurodegenerative conditions, I believe that CBD will stop those in the tracks. And I have seen CBD reverse a good portion of Alzheimer's disease when I've been using it in individual patients.

Now, one patient I had, he was an 82-year-old Korean War veteran, who all he could do was sit in front of the TV and watch television, and he grunted in order to give his signals that something was going on. After a few weeks of using cannabidiol, he was ready to write his memoirs about his Korean War experience and his assault on a machine gun nest in Korea. It was just amazing. Phenomenal. Energized and active. It was really overwhelming.

Now, in that case, you did have to watch out for the dosage or the serving sizes – what we like to say – because it really isn't a drug. It's a food product.

So in Alzheimer's disease, for instance, what can happen if they get too much of the cannabidiol, they can actually get over-activated. And then you're dealing with somebody who's been absolutely calm and peaceful and not interactive at all, and suddenly they're activated. They're energized, and they want to do things, and go out and do stuff. But that may not be appropriate for that kind of person.

Dr. Davidson: Wow. My mind is still thinking that, "Yeah, CBD is like the next vitamin D." I mean the Crohn's disease thing just blows me away because basically that's the medical solution is take the colon out.

Dr. Blair: But I've seen reversals by endoscopy in six weeks, where there is no evidence of disease using cannabidiol. It's truly extraordinary in terms of its result potential.

Dr. Davidson: You mentioned Big Pharma basically doing research with it. Is that really a big area from your understanding that they're doing research in is the endocannabinoid system and affecting that?

Dr. Blair: Oh, my gosh. You know if you look closely at almost all of the effective drugs that are out there, they are interacting with the endocannabinoid system. And what Big Pharma is trying to do is capitalize on things like cannabidiol, and take that specific ingredient and how it works, and then create artificial or synthetic molecules that will replicate that particular activity. Because they can't patent cannabidiol, but they could patent something that's got a small variation on it, which they do all the time.

So a huge amount of research is going on. That's why there are over 7000 studies on the endocannabinoid system. And with regard to cannabidiol and some of the synthetic cannabinoids that are out there, there's a total of almost 30,000 medical literature articles that are on the topic. This is a huge area. It's a new frontier for Big Pharma.

But here's the problem – Big Pharma may be able to get a specific substance like cannabidiol and replicate and create a synthetic molecule, but it's not going to work the same as the CBD that comes from an organic hemp product, because cannabidiol really works well with others.

And what I'm talking about are some of the other things that are in the hemp oil that are naturally there. And so much of these are typically included in a really good product. And Big Pharma can't reproduce that. They are going to have to use a very pure and clean– and that's to their detriment because they're not going to get the results and the performance that we can see with these organic products coming from the hemp.

Dr. Davidson: Makes sense, and totally agree with that as well too. So get into maybe some practicality

about CBC. How should people use it? I see things out there in use clinically as well too. I mean I'm not new to this world by any means, but I mean there's sublingual. There's tinctures where there's like MCT. There's capsules. What's really the best way to use CBD? And even, I guess, for detox purposes or like supporting the detox system?

Dr. Blair: Well, I usually like to say it's the way that the patient will use it. Because so many of the things that we do as providers, we push it out there, but they may or may not use it because they don't like it. And if you don't like the taste, then you're not going to eat it, and you're not going to use it as regularly.

We got to figure out a way for the patient, what their preference is, to meet within their particular lifestyle. What's the best way?

That's the one the patient will take and use.

In terms of the forms, CBD is now coming in several different forms. As you mentioned the capsules and the oil tinctures, and mixed with coconut oil, the MCT variety. And it also comes as a thick and concentrated paste. And new and coming out, and it's already out there are some lotions that are available.

But a new product that is pretty exciting are the liposomes. And the liposomes, what they have done with the CBD is they've micro-sized the molecules so that they're really small and then wrap them with phosphate molecules and made them water-soluble.

So now you can get a water-soluble product that you can mix with drinks and you can mix another food, and it's pretty flavorful so you can take it directly and pump it into the mouth. Now, what I've seen with the liposomes is sometimes they

are 5 or 10 times as potent as some of the other CBD products. They're really impressive.

Dr. Davidson: I didn't know that. So those would be liposomes that you would mix in a drink and drink? Or are they also capsules or both?

Dr. Blair: So they're coming either as a pump that goes directly into the mouth, or it's something that you put into a drink – your favorite beverage.

Dr. Davidson: From a clinical end, kind of what I like to do is I like to have people mix the concentrated paste, have them put in their mouth, sublingual absorption, put a little bit of the tincture in so there's a little bit of flavoring, and then you mix it with some MCT coconut oil that when you swallow it, it seems to better absorb it. What's your opinion on that manner?

Dr. Blair: I think it's a great way to do it. And if you're getting the results that you're looking for, you're getting the symptom control, and you're getting the response in terms of the body, that's fine.

Everybody is so different when it comes to the cannabinoids. Some people need a lot more, and some people don't need very much at all. So you got to find the right dose for that individual, and there's no easy formulary that says, "Oh, well, I'm going to need 32 milligrams of such and such CBD in order to achieve this result." It really doesn't work like that. So many people are different. And it doesn't depend on the body size.

It's really quite amazing. Big people sometimes require less and small people sometimes require more. I think it's probably more in line with the degree of dysfunction of the endocannabinoid system.

Dr. Davidson: Well, you just took my next question away – how do we dose this? So looking at somebody, let's say somebody has Alzheimer's or Crohn's, and it's a severe case. So because of the severity of the condition, oftentimes that would require a higher dosing than somebody that's not in that same type of scenario.

Dr. Blair: Yeah, I agree that we need to be a little bit more aggressive with these individuals, and we've got to establish trust in our relationship with them. And we've got to establish effectiveness, and we don't have the luxury of taking our time in those critical situations.

So for Crohn's disease, I like to be really aggressive with that and start off at about 90 milligrams per day. I usually have them divide that up into 30 milligrams three times a day and those kinds of serving sizes. And that seems to do really well for getting it under control.

Then once it's under control – Crohn's disease is a bit of the exception because we're talking about very distinct phases where you've got this acute phase, where you got to get control of it fast because these people are undergoing major suffering.

Then in that case, I'm going to do that with the 90 milligrams and then drop it down a little bit when you get control of those things. People are feeling better and you're getting a good response, then you can drop it back to about 60 milligrams.

And then for once you've been on it for a while and you've established the changes, and you're really pretty well normalized, oftentimes we're able to reduce the dose down to a quarter of the initial dose. So from 90 milligrams, you're really down in the area of 20 to 30 milligrams a day for maintaining somebody and keeping them in good health.

Dr. Davidson: So for somebody that's maybe not in that scenario, and again it's very individualized what people need and not cookie cutter. So if somebody is not Crohn's, not Alzheimer's, they just want to improve their health where they want to get the benefits of cannabidiol, is it a safe dosing just to start with 20 to 30 milligrams a day then?

Dr. Blair: Well, I would recommend 15 milligrams twice a day as a standard. It's an easy place to start. But the next step is to make changes rapidly. Because there's no toxicity, then I like to move quickly with it. And the side effects are almost nonexistent. So if 15 milligrams is not doing the job, I ask people to double it on the first day, and move up to find out what works for them. That seems to have been very effective about finding the right dose.

And usually, a couple doublings is enough to find what they need to control their symptoms and for them to be satisfied with the improvements that are being made. And as soon as people start to see the benefits that are coming from CBD, then that's an indication that they've reached the level that is effective for them and they're going to see long-term physical improvement and restoration with it.

Dr. Davidson: From a clinical end, what's like the highest dose that you've recommended to a client before – a patient that you can recall – or got up to maybe?

Dr. Blair: I think in total milligrams I've been up to 250 milligrams. And this was a gentleman who had severe pain syndrome as a result of a toxic reaction to statin-type drugs. And he was having a great deal of difficulty, but he found that the cannabidiol was very effective, at least reducing his pain levels by about 50%. There's actually pretty good evidence that says that

opioids may actually make things worse for a lot of people, and that's because of the tolerance and the addictive characteristics. But it also has to do with some of the biochemistry that's involved.

Dr. Davidson: That's unbelievable. What are the top things, the most important things like when you're looking for a CBD product – some important things to make sure that your product kind of covers bases wise?

Dr. Blair: Before we do that, just let me say what's the low dose. I have seen people respond to 5 milligrams a day. That's all they need, and they've been perfectly fine with that. So that's what I mean – the range of ability there is huge. And you never know in a particular individual what's going to be the best for them and how it's going to work well for them.

When you have that flexibility, and you're not dealing with any significant adverse reactions and you don't have any toxicity or drug interactions – and, by the way, there's no coagulation or platelet effects. So you don't have to worry about any coagulation therapy that might be undergoing. So you got all of those positive things that are there and protecting you. That means that you can be pretty aggressive with using cannabidiol in many different situations.

Dr. Davidson: Wow. That's such a range, too – 5 milligrams. And so in other words, like if somebody has had a stroke or a heart issue and they're taking warfarin or maybe aspirin, or something to thin the blood, there's no adverse effects from CBD of that.

Dr. Blair: No. Once again, cannabidiol is a really smart molecule, and it knows what to do. That reminds me of one particular situation, and that is hypertension.

So cannabidiol will actually lower the blood pressure in some individuals. But guess who those people are? They're the ones with hypertension. It doesn't lower the pressure in people who are normal.

Dr. Davidson: Wow. Again, that's almost like an adaptogenic-type property.

Dr. Blair: Yes.

Dr. Davidson: That's awesome.

Dr. Blair: Very, very clearly.

Dr. Davidson: So you hear of hemp and then also marijuana too, but you hear of these plants being highly pesticide-sprayed. What's your take on as far as looking for a good product?

Dr. Blair: Well, I think that's a really good point. Finding a good CBD product is a challenge because right now it seems like the wild, wild West in the marketplace looking for cannabidiol. We frequently have people who will come over to the Elixinol brand that I frequently do consulting with, and they will have tried another brand and it's not working for them. It's not giving the effects that they were hoping for. And then when we switch them over, they've had great success from it.

And maybe because of the way that cannabidiol is – where it comes from – if you're looking for a good CBD product, a quality CBD, it should be coming from organically grown hemp that is in mature fields that's done by mature farmers. And so these people have typically been in the business for 20 or 30 years, an entire lifetime. And they can do that in Europe where growing hemp is part of their lifestyle. They've been doing it for probably centuries, and this is just an extension of what they've been doing. Their fields are clean. They

re mature. They don't have any of those toxins. And they practice organic production.

And then the other thing for the CBD is that it needs to be processed without solvents. What you're seeing so often in a marijuana community is somebody is using solvent in order to extract the cannabinoid out of it. That doesn't have to be there. And using the latest technology, you can extract the cannabidiol without using any solvents that have any residual that are in the product.

And then, if it's really a quality product, they're testing it. They're testing it batch by batch, so they can guarantee that it doesn't have the solvents, the pesticides, the metals, the molds, the bacteria. All that stuff is out of it. And you ought to be able to take a look at that. You ought to be able to see that information and understand it.

And then the other piece that is really kind of interesting is that cannabidiol really plays well with others. And for that reason, you actually want to have a little bit more of the hemp molecules, the other things that seem to help it like other cannabinoids. There's probably over a hundred different cannabinoids that we know about, and hemp actually has about 60 that are there. And they're in small amounts so they're not very significant, but they do seem to help the cannabidiol as well along with some of the other things that are there like the flavonoids and the terpenes, some other oils that are present in a really natural hemp product.

Dr. Davidson: So top four things then basically making sure you're finding an organic source of cannabidiol. The extraction doesn't use any solvents or chemicals. You're looking for a company that will test and make sure that

it is what it is and that there isn't contamination and things in it. And the n also, I almost get the feeling it's almost like a whole food version of hemp, where you said there's over a hundred different cannabinoid molecules that research knows of now. Hemp has 60 of them?

Dr. Blair: That's what I understand, and I could be wrong on that particular detail, but the point is that there's quite a few other substances that are there that the cannabidiol is working with.

Dr. Davidson: Wow. My preferable brand is Elixinol. Is that top of the list for you as well?

Dr. Blair: Well, I can tell you that Elixinol meets all of those criteria. They are customer-focused. They're clear and accurate in their sizes. Because if you look in the marketplace, it's really hard to figure out what people are taking, but Elixinol does a really good job with easy labeling that says how many milligrams of cannabidiol are actually present in their product.

Dr. Davidson: Oh, nice.

Dr. Blair: And then, it's also high quality. It goes through all of these processes. Plus it's independently tested. So you're getting real laboratory results batch by batch. And the best part is the clinical support with it. Where else are you getting clinical support for some of these several problems, answering people's questions. Elixinol is doing that. They're filling in the gaps.

Dr. Davidson: Yeah. Well, I use them clinically because, bar none, I just found that it works. So I think if somebody is going to try, if they've never tried cannabidiol or CBD, that would be the first place I would start is Elixinol. And I'll spell Elixinol too because I always had an issue trying to spell right away.

It's E-l-i-x-i-n-o-l. Elixinol.

As we're kind of wrapping up it here, Dr. Blair, what recommendations do you have for people to learn more about CBD if this is definitely like the first exposure where they've heard of it and they want to dive into more? What are some good resources?

Dr. Blair: Sure. Let me list out some of those. But first, I just want to go over some of the things we talked about and emphasize that how CBD can really support the detox in every way of the process, and in restoring and protecting the body, and enhancing the recovery that's there. And I just have to emphasize that CBD is safe. It's legal, and it's effective. And it's available everywhere.

And it doesn't have any significant adverse effects, toxicities or drug interactions. And finally, the CBD quality is absolutely paramount and getting it from the best source.

Now, if we're talking about learning more about cannabidiol, the Elixinol site can provide some of that information. That's elixinol.com, and go to the education area and you'll get plenty of information about the literature that's been done regarding cannabidiol and some of the cannabinoids.

There's another organization called the Realm of Caring in Colorado that's providing a lot of information, a lot of advice, and a lot of help with regard to learning about and applying cannabidiol as well as some of the other cannabinoids that will contain some THC.

And then finally, there is a website at Project CBD, and that's projectcbd.org. And that location has quite a number of articles that are linked, taking you to medical articles that you might want to read or provide for your physician so

that they can look over some of the benefits that are being seen.

And then finally, if someone would like to learn more or like a consultation with me, they can contact me at prohealthadvisor.com. And we can have a conversation and we can talk about how cannabidiol might be effective for your condition.

Dr. Davidson: Awesome. Such great information, Dr. Blair. I have so many notes. I was like writing on top of my notes because I ran out of paper here. I really want to thank you for taking time out of your schedule to join me on The Detox Project. I just appreciate your knowledge and information so much.

Dr. Blair: Jay, what a pleasure to be here and to talk with you. I really enjoyed working through this and learning from you, as well as sharing some of the exciting things that I've seen with cannabidiol.

Dr. Davidson: Awesome. Well, as you've heard from Dr. Blair, it's important with maintaining or restoring health. They will look at the body as a whole holistically and definitely a couple of huge takeaways, I just get this feeling that CBD is really the wave of the future as far as tools to address the endocannabinoid system, its adaptogenic properties.

And I think if you have pain, sleep issues, anxiety, inflammation, brain fog, top of the list is probably CBD as far as a choice for cannabinoids. So definitely take this life-saving, life-transforming information home with you by clicking on the banner beside or below, and definitely share those with your friends and loved ones. Post this interview up on Twitter or Facebook. Share it. I mean this is awesome information.

And definitely don't forget to visit Dr. Philip Blair. His website again is prohealthadviser.com. And definitely, I would recommend, if you're going to check out the CBD or try it out, to go to Elixinol. And they got some information there as well too under their education tab. Elixinol.com. You will not be disappointed.

Maximum blessings. This is Dr. Jay Davidson.



The Healing Power of Cannabidiol (CBD)

Donna Gates, MEd, ABAHP and John Hicks, MD

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Donna: Dr. John Hicks, an international lecturer, author, and pediatrician, Dr. John Hicks has practiced integrative holistic medicine for over thirty-five years. With an innovative approach to chronic disease, Dr. Hicks uses objective laboratory analysis to individualize medical and nutritional support, applying progressive and proven treatments to the physical and emotional wellbeing of each patient.

A researcher and clinician, Dr. Hicks' recent focus has centered on the human endocannabinoid system and how cannabidiol—better known as CBD—provides powerful anti-inflammatory modulation, which is helpful to patients who suffer from dysfunction of their immune and nervous system that results in pain and adverse neurological consequences.

Now, I know that's a lot of big words but just stay tuned here because we're going to get into what that means, cannabidiol. And I'm not sure even if I'm pronouncing it properly because I usually call it CBD. But let's welcome Dr. John Hicks. He's practicing in central California. He is the expert on CBD. And we're super lucky to have him for the Gut Summit and soon you'll understand why.

So Dr. Hicks, thank you. Am I even pronouncing that word right?

Dr. Hicks: Exactly.

Donna: Oh, good because everybody now says CBD. And I have been told that this is going to be hotter than vitamin D has been. And I know that most people... And this Gut Summit is going to be available to over a million people. So I have a feeling that many, many people for the first time—and we have a lot of physicians listening as well—this will be the first time they've ever heard about CBD.

So why don't we start with some real basic information about you first? We know you're a pediatrician. You've been into functional medicine and very, very open to diet. And thank you very much for being open to fermented foods. And your wife Betsy is. And you teach about them. So I'm really grateful for that. But how did you get started and over into this path of the CBD?

Dr. Hicks: Well, I got sort of frustrated with...I work with a lot of kids with autism. And it was like this explosion of seizures. And the seizure medication has such significant side effects, I decided there's got to be a more natural way to do this rather than just the medication. So I started looking for alternatives that could help me with the patients with seizures.

Donna: Now do you think that there are more seizures today? Because we both work with autistic children. And I would agree, it

seems like it's become more of a problem than initially, say, ten years ago. Do you see more seizures than there used to be?

Dr. Hicks: Oh, yeah. I think so. And I think there's probably a lot of environmental pieces to that. But I think it's also what's going on in the body and the body's ability to adapt or not adapt. So it really gets down to that.

Donna: Well, let's begin to tell people what CBD actually is. Should we start with actually defining what it is? Or should we start talking about the endocannabinoid system, which is literally until I met you and attended a lecture that you gave, had never heard that word in my life. And I am really into health. So I was shocked. I thought, "Endocannabinoid system? How did I miss this?"

Dr. Hicks: Well, this is something that nobody really knows a lot about in the United States. And the reason is cannabidiol or CBD is one of the constituents of marijuana. So THC is the main one and it has psychoactive components. However, CBD does not. So its application can be a lot broader because it really don't cause any psychotropic effects.

And so once in the 60s, this goes all the way back to the 60s when marijuana was a big deal. And trying to discover what THC looked like. What was the compound? How did it look? And then what happened

is once they identified that, some researchers in Israel actually started to identify that we had receptors for that. And the research then just sort of exploded.

There's two types of receptors. This cannabinoid receptor 1, that's the one that THC reacts with. And it's throughout the body, heaviest in the brain, but it's in all tissues. And then there's CB2 receptors and that's where cannabidiol does what it does. And those receptors were thought mainly to be just in the immune system, so in neutrophils and macrophages and monocytes and B cells and NK cells and T cells in the spleen.

So as research went on, they found out that they're also in the brain and that the system is really a system that's intercellular communication. And its job is really homeostasis. And it reacts in an instant to the changes in the environment, either internal or external. So it's the system to keep us in balance and keep us well and healthy.

Donna: Well, and the other parts of the world like Europe, for example—Israel I think you said if I remember correctly—that that's one area of the world where they've done a lot of research on the CBD's, the receptors and all. But because we thought that marijuana was something we didn't want in our country, that all the rest of the information about the endocannabinoid system was repressed, but in other parts of the world they've been doing research on it for a long time?

Dr. Hicks: Yes, because in this country you can't do research on it because it's a class 1 and that means it has no medical benefit. So the only research you could do was to show that it was bad and not helpful, that it really had not medical benefit. So that really

limited what was done here.

Then as research went on, they started to make compounds that mimic the endocannabinoids. So like marinol, sativa, there's several different ones. And they are medications that mimic the activity of the normal endocannabinoids that we have in our body. And these are natural compounds that we make. And they do different things in different sites.

So like when you look at the gut, there's a lot of different receptors that doing different things in the gut. And CBD, one of the things that it does in the gut is reduce inflammation. And it does that by directly decreasing the cytokines that are creating more inflammation. So it literally interacts to decrease the production of proinflammatory cytokines and chemokines.

Donna: Okay, when you say inflammation, it probably would be a good idea to paint a picture for people that are new to this whole issue. I know we have newbies listening and we have very, very experienced people listening to this summit. But for people that don't know, how important would it be to limit inflammation in the gut? Because is this related to leaky gut, for example?

Dr. Hicks: Well, yeah. I mean, to me the gut is where it all is. The gut is your second brain. And when the gut isn't working normally, you have big issues throughout the body because inflammation anywhere triggers inflammation throughout the whole body.

So if you look at some of the research that came out of Belgium looking at the microbiome—the probiotics we have in our gut—that when that gets imbalanced and we get too many gram-negative bacteria, the lipopolysaccharides

from those bacteria interact with the endocannabinoid system, increasing leaky gut and now skewing the endocannabinoid system into inflammatory production of endocannabinoids and endocannabinoid receptors. And depending on where those receptors are, you'll create different things.

So like in fat tissue, you increase the CB1 receptors, which this is one of the big things now. They're seeing an imbalance in the microbiome in obesity and this chronic inflammation type II diabetes, all of this stuff. But it's all related to the gut. It comes back to the gut.

Donna: This CB1 receptors, those are the ones you started off at first by saying that marijuana THC affects those receptors. But can you explain the tie in there? I mean, more about the CB1 receptors, I guess. Because for myself, I've got this limited understanding of what else the CB1 receptors are doing.

Dr. Hicks: All right. So they can increase inflammation. So when you look at adipose tissue, fat tissue, the increase in CB1 receptors, there's also an increase in what's called anandamide or AEA, which is our natural compound that stimulates the CB1 receptors. So what they're finding is there's up regulation when you have dysbiosis of the endocannabinoid system. And depending on where they inflammation is, you'll have different receptors that are increasing.

So in the fat tissue, it's the CB1 receptors that increase. In your brain with inflammation, it's the CB2 receptors. So our body is asking for help. And these endocannabinoids are trying to make a difference. But when it gets out of balance, then it can get carried away. And that's like when you start increasing probiotics, you start

using prebiotics, you re-initiate that balance in the gut—which lacto-fermented foods do—you start to decrease the priming of that endocannabinoid system. And you decrease inflammation. So not only does it heal the gut, but it decreases other inflammation in other places.

Donna: So everybody that has a condition of inflammation from irritable bowel, obviously Crohn's and colitis and so on, they really need to pay attention to this, but what about the normal person? Would they benefit from taking care of their endocannabinoid system in their body? Do you think that everybody to a certain degree is suffering a certain level of inflammation in their gut today?

Dr. Hicks: Yeah. I think we all do, even the ones of us who are aware of that and are working to try to rebalance that. I think we all have some inflammation. And the interesting thing is if you look, there is a patent that's been issued by the U.S. government on cannabidiol, and in that it talks about its potency as an anti-oxidant. And for your brain, it's more powerful than melatonin and vitamin C. And it starts to go through this whole list of things and the diseases that it can be used for. But in that patent it says, "As a preventative and a treatment." So balancing your endocannabinoid system is something that everybody should be thinking about doing.

Donna: So even for prevention, really. And also the other thing I find is very interesting because we were not too long ago together at the AutismOne conference, this is something that's even safe for children.

Dr. Hicks: Yes. And that's really, to me that was the huge draw to cannabidiol or CBD is that this you can use in kids because it doesn't have the psychotropic

effect. So when you have kids with autism that are having seizures, you don't want them getting spaced out. So the idea is how can I help this without creating that problem? And the CBD presents really a tremendous mechanism by which you can do that.

And the way it works with cells for seizures is it's stabilizing them and maintaining them to be less excitable. So it controls calcium, it works with serotonin receptors, it stabilizes mitochondria, it stabilizes the endoplasmic reticulum. It does all these things that we know how it works. So now as you look at this and you go, "Well, how is this medication working?" we don't even understand how a lot of the medicines work at this point.

Donna: But you do know about how CBD works, you're saying, because of all the research.

Dr. Hicks: Yeah. It's because there's hundreds of thousands of articles. And I think in the last couple years, there've been 20,000 articles a year on CBD.

Donna: Wow. It just absolutely still floors me. I've known about this for maybe now six or seven months. And it just awes me that with all that research we're just now hearing about it! And I've asked everybody around me, even just normal people. I'll just say, "Have you ever heard of CBDs or endocannabinoid receptors?" It's not even anywhere in their radar screen. So it's just shocking.

But you mentioned serotonin. And that immediately made me start thinking about other neurotransmitters because the neurotransmitters are also in the gut. So is there something that the CBD is doing to affect how the gut makes these different neurotransmitters: serotonin, dopamine, GABA and so on?

Dr. Hicks: Well, it's going to interact with the cells that are producing that. It's also going to interact with the enteric nervous system. So it helps to bring balance there. And ninety-five percent of serotonin is in your gut. So it's the good probiotics that are helping make these things and then being utilized. So anything that will help stabilize the microbiome and decrease inflammation there is going to be a huge benefit to the whole body.

Donna: So just for people again that are new to some of this language, the enteric nervous system is also another word for the gut-brain. So really what you're saying is this is great for the brain and great for the gut-brain.

Dr. Hicks: Yes.

Donna: And you had told me earlier about the effect of the CBD on brain cancers. Can we talk about that for just a little bit?

Dr. Hicks: Yeah. It's very interesting because the work that's now being looked at big time—and tons of articles are coming out on it—on cancer and CBD and how it works in cancer cells. And the interesting piece is that in each cancer cell, it works differently. Which is amazing to me that here this one compound, well it affects the CB2 receptors.

It's a mild agonist, in other words, it's a positive influence a little bit. But it's not a huge thing. But CBD also works through other receptors. So its power to help and change things is very broad, not just limited to the endocannabinoid system. But it goes outside of that to help.

So with cancer cells—and some of them when it's taking the good neurons and it protects their mitochondria and endoplasmic reticulum—in cancer cells, it disrupts them. So it causes them

to kill themselves. So it's called apoptosis. So here it is, the normal cell it's protecting and the cancer cell is destroying.

Donna: That's extraordinary. That's why I think people are saying this is going to be even bigger than vitamin D. But since this is a gut summit, I'd love to tune in a little bit more on the gut.

First of all let's go back and let people know that they can actually take CBD as a supplement. They have access to this. So we don't want them to think that this is something only available to doctors. So could you talk about the CBD supplement that's completely approved? We're not doing anything illegal here by buying it or taking it. So let's talk about that first.

Dr. Hicks: The company HempMeds PX imports hemp oil, which is completely legal. Then from the hemp oil, they go through the process of collecting the CBD and concentrating it in the hemp oil. So now you have industrial strength hemp oil with high CBD. And that is the supplement. That can be used as a supplement. It can be used as a treatment. So it comes in oils, sprays, salves. There's healthcare lines, beauty lines. So it's really available in all fifty states and actually forty countries around the world. This is a legal substance because it doesn't have the THC in it.

Donna: And why would they put it in a skincare line, shampoo or creams for your skin?

Dr. Hicks: Well, because it's actually helping. And it's absorbed through the skin. So as you put it on your skin, it goes in. And it's an antioxidant. So it's protective to your cells. And it's good for your skin. So it's going to help decrease aging because it's supporting the tissue strength and elasticity. And it helps support those cells and all the tissue. So it makes sense that

there's probably many, many more applications that we're going to find over time.

And my hope is as you look at marijuana, where CBD comes from, there's a lot of other cannabinoids. There's sixty-five cannabinoids and each one has a different spectrum of activity. So there's other ones that fight cancer. There's other ones that are antioxidants. There's other ones that are neuroprotective.

So it's really interesting when you start to look at this plant that was sort of put here as a gift to us, that we've decided it's a bad plant. So we're not going to allow it. And we're not going to allow anything with it. But I think what's happened with that attitude is we really, for a lot of years, we've missed out on a lot of benefits. And I think what's happening is people are getting more open to ask, "How can I stay healthy? How can I take care of myself?" And it's that self-empowerment piece that I think is huge.

Donna: And a lot of people are aging. There's seventy-nine million baby boomers now in the U.S. And they're extremely interested in not turning out like their parents and grandparents, where they've lost their independence. They've lost their memory. They're a huge burden on the society. So really we have to have something like this. It truly is a gift.

Dr. Hicks: Right. It truly is. And you look at the neuroprotection piece, you bring that up. It decreases dementias. It can be help when you have Alzheimer's because it helps the cells that get affected by the plaques, engulf the plaques and destroy them. So it can literally stop that in its tracks. So you can use it with Parkinson's because it stabilizes those neurons and prevents the loss of the dopamine. So you just go down the list and start looking at the research and it's really just amazing.

Donna: Oh, it is amazing. And in the case of Alzheimer's or Parkinson's and there's already a certain amount of destruction to the nervous system and brain, does it help regrow new cells, though? Because you mentioned the mitochondria also, the little powerhouse energy factories inside the cells. Can it help grow new cells and just have a real positive effect on the DNA?

Dr. Hicks: I think it does have that effect because what it showed is in some of the studies they were looking at with oligodendrocytes, that's a type of neuron and it works to build myelin. And what the studies are showing is that it saves oligodendrocytes. It protects them. It protects the stem cells that produce them. And it stimulates the production of myelin.

Donna: Wow! How about anything with bone? You reminded me of stem cells and all the stem cells in the bone.

Dr. Hicks: Yeah, it increases bone formation.

Donna: Oh, wow! Oh, yeah. Actually I remember seeing that in some of the literature. I was kind of surprised that its range of function: brain and then it goes down to the bone, too? That's pretty extraordinary, as well.

Dr. Hicks: Well, I think that just shows you what the power of the endocannabinoid system is. That it really affects every system throughout the body. And that if we can support that system... The last time we got any external endocannabinoids given to us was in breast milk.

Donna: And what are they doing in there? Same function?

Dr. Hicks: Well, it stimulates appetite in the newborn. So it

works for that. And it's interesting because when you look at what goes on in the neurons and with the work on CBD, it can work two different ways depending on what's going on with the cell. So if the cell's under stress, it can protect it. It can stabilize it and help it regenerate. Or if it's an abnormal cell, it will literally help that abnormal cell increase what's called apoptosis or killing itself. It has it commit suicide because it's abnormal.

Donna: What about people with eating disorders, which is definitely related to the digestive tract, eating and digestion? What about people who have bulimia? I'm noticing that a lot more in men lately, for some reason. And other eating disorders, which is rampant in young teenage girls. If they were taking it, probably would have regulation effect for them?

Dr. Hicks: Yeah, because it really does work on the whole limbic system. And it works on the hypothalamus and pituitary. And actually in Europe, they had designed for obesity, an antagonist, a blocker of the CB1 receptors. But the downside was they had significant...What they did was just block them all. So these people lost significant amounts of weight very quickly. But they really got very depressed because it's in the limbic system and has to do with your mood and emotion. So you don't really want to completely block something. But that's sort of how you learn things.

Donna: Again, a bit off the subject, how about everybody who's out there trying to lose weight?

Dr. Hicks: Well, it does help modulate appetite. So it can help with that. And the other big thing, I think, with weight stuff is what's going on with the gut microbiome. And as you look at the research on obesity and those things,

there's a shift in that. And we lose some types of good bacteria that we should have, and other types increase. So you've got to really address that. And that's where CBD can help with that some.

Donna: Okay, let's go into that more then. The effects that the CBD has on the gut microbiota. And then also are they—the microflora, the microbiota...It's hard for me...everybody's saying microbiota now. But for twenty years I said microflora. It's hard for me. Microflora's so much easier to say. But I'd love to know about them affecting the gut, either the receptors for the endocannabinoid system or just both ways. In other words, the microflora affecting the receptors, and then what is the CBD doing to the microflora?

Dr. Hicks: Well, what happens is the microflora can stimulate or reduce the number of the endocannabinoid receptors. And as it does that, it will also increase or decrease the amount of the endocannabinoids that are produced in your body.

So like we were talking about with obesity and fat tissue, what they found was not only did the CB1 receptors increase, but anandamide, which is the stimulant to that, increases both in the gut wall and in the adipose tissue and in the liver. So then what that does is stimulate more and more fat production. So it's this vicious cycle of the microbiota stimulating the endocannabinoid system, which then produces more receptors, produces more endocannabinoids, which then reinforces the inflammation and then reinforces the imbalance in the microflora.

Donna: Okay so to summarize that, the microflora actually increased the number of endocannabinoid receptors in the gut?

Dr. Hicks: Right. They can increase

that or decrease that depending on who's there and what they're doing.

Donna: Okay. So if they're bad pathogenic microbiota, then they're going to increase the number of the CB1?

Dr. Hicks: Well, in adipose tissue and in the liver and in the muscles, they'll increase CB1 receptors. But that same inflammation piece, because it travels through the blood, crosses the blood-brain barrier, the inflammation in the brain produces more CB2 receptors. So it's this body saying, "This is out of balance. I need more of this to reestablish the balance." And that's where CBD really kicks in because it partially blocks the CB1 receptors so it can help decrease the adipose tissue and decrease that inflammatory cycle in the adipose tissue in the liver, in the gut. And then it can also help with the brain inflammation and decrease that, protect the neurons, prevent further damage.

Donna: Well, you know there has been a lot of talk in the last several years about that imbalance in the gut shifting too much toward the firmicutes and not as much of the bacteroidetes. I've heard people pronounce it three or four different ways. But that shift occurs. And then nobody has ever explained that very much. Bringing in the whole conversation about the endocannabinoid receptors is basically giving an explanation to that.

Dr. Hicks: Right. And this is all really new. When you look at this, there was an article by P.D. Cann, "Crosstalk Between the Gut Microbiota and the Cannabinoid System Impact on the Gut Barrier Function and Adipose Tissue." This is from 2012. And this is one of the earliest articles on this anywhere. So up until that point, this really wasn't known. And in here, they're

talking about—in this article—they talk about we have now seen this interaction, and that it's really an explanation that we haven't had for a long time because they just hadn't linked that together.

Donna: That's true. Yeah. So, simple question, can the cannabidiol, the CBD basically improve gut flora? You want to establish a really healthy ecosystem in your gut, so you would take the CBD and that would improve? We're always talking about prebiotics and taking fermented foods and taking actual certain specific probiotics to introduce specific strains into your gut. But then you take the CBD, as well. So what effect is that going to have on the microbiota themselves?

Dr. Hicks: Well, I don't know that it's going to affect the bacteria themselves. However, it is antibacterial. So you take the bacteria MRSA. It kills MRSA. So there must be some selectivity of pathogenic organisms that it will start to help wipe out. As you look at the power of that to kill MRSA, then what are the other potentials? And I think that's really something that I haven't seen a lot of research on yet. But I'm sure that's going to come.

Donna: That's important though because then the bacteria are fragile. And this way they've got a wonderful weapon helping them get rid of the bad guys.

Dr. Hicks: Right. And I think that the whole decrease in inflammation, decrease leaky gut, it all sort of works together. So it's just another layer of helping to heal guts that have issues going on. It's just something else we can now add and say, "Gee this also going to help." The big piece is getting the prebiotics, probiotics, lacto-fermented foods in because they make huge shifts. But now we can just say, "Okay, now if we add this,

we can help quickly get rid of the leaky gut," quicker than we could before because this is actually going to work right on that piece to help the enterocytes maintain their integrity, helping the tight junctions to be tight.

And as you look at what can happen when dysbiosis goes wild, you get all the leaking. So how do you help clear that? Well, you've got to change the microbiota to do that. But the neat thing about CBD is it's just going to be another piece you can add to it that's really going to help clean all that up.

Donna: So there's no research yet showing that it actually increases the number or is selective? Like human milk sugars, for example, one of their important functions is to actually help select the beneficial bacteria grow and help the bad ones fade off so the baby actually ends up with a healthy gut microbiome or inner ecosystem. So does the CBD, is there any research that shows that it could be working that way?

Dr. Hicks: I haven't seen any. That doesn't mean it's not there. Trying to sift through...I have about 100,000 articles for me to sift through this and keep up with the new stuff that's coming out. So I will definitely look at that. And I can let you know on that.

Donna: Okay, great, great. Okay, so the good news is we now have a perfectly amazing product available to use that's completely legal and no side effects and has so many amazing benefits all over the body. So we can get this product.

I personally have been taking the capsules. I started off with the little spray, the little pump, because I was suspicious. I have to tell you I was thinking, "Oh, this sounds a little bit too good to be true. And I've got to check this out first before

I take much." But I immediately at the A4M conference, got a bottle and started bringing it home and spraying three or four pumps. And I really didn't notice very much.

So the next conference I talked to you all some more and moved up to the capsules, which is giving me much more, twenty-five milligrams, which really isn't that strong of a dose either. And it isn't because I'm so healthy. It isn't that I was different one day and woke up as a different person. It wasn't like a black and white difference for me.

But I will say that because I've been taking it for a while now, as with time, the first few days I thought, "Hmm, I like this." And then a week later I'm thinking, "You know, I like it even more." And I'm not sure exactly why because I have a feeling it's just doing a lot of good things preventative and calming. It has a very calming nature. I feel that. I'm not even sure of all the things it is doing. But I know it's doing things. So I'm a good example of a healthy person that's enjoying it very much.

Do you mind telling us more about how to use it? Because I'm sure a lot of people are like me—like I was in the beginning—kind of skeptical.

Dr. Hicks: Right. Well, it almost sounds too good to be true. And as you start reading about this it's like, "Golly, this can't be really real." But as you see more and more research that's been done, it really is.

And you want to start with a small dose. So like you did, you started with a spray. Do anywhere two to four sprays. And what I suggest for a lot of people is you try it at bedtime because what it does is it helps your brain just to calm down and brings you down. It can decrease anxiety. So it's anxiolytic. So what it does is just allow your body to go to sleep easily. And it's not going to make you go to sleep.

If you're tired, you'll go to sleep. If you're not, you're not going to go to sleep. But it's just that's a good time to try it and get a feel for what happens.

And then you can always start to gradually increase your dose depending on what's going on. But for most people...I've had a lot of kids with anxiety that I treat with it. And we use three or four sprays at bedtime. And for some of the kids, it lasts the whole day.

So it's only like three or four or five milligrams. So you don't need a lot. And that's the neat thing about it is you don't have to take huge doses.

Donna: And it's not addictive either. I was glad to hear that, too.

Dr. Hicks: It's not addictive. And you don't build tolerance. So let's say you're a little anxious and you're wanting to work on the anxiety and you figure out you work your way and you get to twenty-five milligrams and that seems to work. And that holds you the whole day and everything's good. You're not going to build tolerance where you need more and more of it. It's going to stay. That dose is going to keep working at that dose.

Donna: Well, see, that is another connection with the gut right there because stress is very damaging to the gut. When we're under stress, you immediately clamp down and your gut shuts down. And decreasing anxiety is huge. There is research showing that stress and anxiety—elevated levels of cortisol—literally kills the good bacteria in your gut. So I see that as a very wonderful gut connection right there.

Dr. Hicks: Oh, yeah. I mean, it's huge. And the way it helps to modulate that is the receptors in the hypothalamus. And it helps to modulate the releasing factors from

the hypothalamus and the pituitary. So you can really get this influence to your whole endocrine system just by the small amounts of CBD that affect your hypothalamus and the pituitary.

Donna: Are there research studies showing that it has an effect on the hormones, like increasing or regulating estrogen, progesterone, testosterone, DHEA, and so on?

Dr. Hicks: Well, it does help with the DHEA and cortisol. I haven't seen anything exact on the estrogen or progesterone. That's a piece that I haven't done a lot of looking into yet. But I'm sure that it is going to help modulate that because it is controlling that whole piece from the hypothalamus and pituitary. So it's going to have a cascade effect all the way down. There haven't been receptors isolated, per say, in the adrenals. So I'm waiting to see if somebody can finally find something there.

Donna: Wait, are you saying there's no endocannabinoid receptors in the adrenals that we know of?

Dr. Hicks: Well, there's none that we know of endocannabinoid. So the other piece is that CBD works through other receptors. So just because there isn't an endocannabinoid receptor there, doesn't mean you don't have feedback and activity through another receptor.

Donna: Like the hypothalamus, for example. The hormone piece is pretty fascinating, too. And it's such an important part of anti-aging medicine. And this sounds like it's going to be something everybody's going to take for every condition and certainly or anti-aging.

What about when a woman's pregnant? Is it safe during pregnancy when she's actually creating a baby who obviously

has his own endocannabinoid receptors?

Dr. Hicks: Well, they really haven't recommended taking it when you're pregnant or when you're breastfeeding. And part of that is you don't know about the CB1 receptor activity. And we know that CB1 receptor activity, if you're exposed to that in significant amounts during pregnancy or early in life, can cause developmental changes down the line. So that's really been the only thing that I've seen about that is the CB1 receptor pieces. There really hasn't been much said about CBD in that regard.

Donna: At the conference, the AutismOne conference, I sat beside a woman for a couple hours. Well, it was a lecture so we didn't talk the whole time, but then we sat there talking before and after. And she was really fascinating to talk to because a lot of the children become autistic down the road a ways, around eighteen months, two years. But her son was actually autistic from the womb.

And one of the things she said was that he was extremely rigid in the womb. She could literally feel him tense up and wasn't all curled up the way babies are supposed to be. And now we know that even in the womb, babies are born with enterocolitis and a very dysbiotic gut. And so obviously her son fits that. So he might even have been a good candidate for it—but I guess there's not enough research—because the relaxing quality and the positive effect it would have had in his gut sounds like it would actually be something to use in that particular case.

Dr. Hicks: Yeah. And I use it with some kids with cerebral palsy because it does help with that spasticity to reduce that. So it's been helpful with those kids for that.

Donna: Yeah, and so many babies today—this is why we often get called into the picture—they're born and they immediately start screaming. They can't digest even their mother's milk because they don't have the right gut flora right away. It takes a while to set that whole inner ecosystem into place. But they're in pain and they're screaming. And it would be interesting, I think, to see if it can have that benefit because it would help a lot of these babies who start off life, as you know as a pediatrician, they start off with a rough start to life.

Dr. Hicks: Right. Right. And my hope is this is going to be something that's going to help us do that. The biggest thing I've seen really help with that is the lacto-fermented foods and really working on the mother's diet and working on that, and then starting the lacto-fermented foods with the babies, the juice anyway. That can start to help shift that a little quicker.

Donna: Well, thank you for saying that because I've been saying that for a long time. And when it comes from a doctor's mouth, it means a lot more to people. So that's fantastic. Thank you.

Well, can we get the hemp meds? I mean, we can go to HempMedsPRX and order it? We don't have to have a doctor's prescription?

Dr. Hicks: Nope. It's HempMedsPX.com

Donna: Oh, PX. Okay.

Dr. Hicks: Yeah, HempMedsPX.

Donna: And so it's a little expensive. But I'm beginning to see that it's worth it. So somebody gets to the site and they see there's the little pumps. You called them sprays. But when I was taking it, I actually saw it as a pump that I squirted into my

mouth, which you hold under your tongue for a little while, right? And is that...I wasn't sure if that was doing anything or not. Of course, I could have taken many more pumps. Instead of four, I could have done six pumps.

But the capsules, the pumps... Is one capsule enough? And then there's also this little tube. It's sort of a gel-like substance in it. How would somebody know which one to order?

Dr. Hicks: Well, what you've got to do is figure out how you want to take it. So with kids, I would always start with those pumps. Or you can start with the tubes. But what you're going to start with is about a little piece from that tube about the size of a piece of rice. And then gradually work up from there if you need it.

But I think that's one of the things. We're used to taking large amounts of things. And this is one of those where you don't need a ton. Here you are. You're taking twenty-five milligrams and you're feeling these big effects. And that's not a lot, really, when you think about a dose for something. So it's pretty amazing that you can do a small dose and see benefit.

Donna: Well, I guess if you had to ask me the number one thing I'm noticing is I'm certainly sleeping really well. I go to sleep and I think, "Oh, I hope I can go to sleep soon. I really want to have a good night's sleep." And I'm sitting there thinking about how I'd like to go to sleep. And the next thing I know it's morning. So that's a really great thing because I know how powerful it is to sleep. So that already is going to have a huge benefit on everything: anti-aging and everything, digestion, everything! So that I know is a very definite positive.

But also I think that many, many people—and this is very true as we age—that we have a certain level of anxiety in our body. And we don't even know it because it creeps on slowly and surely. And it's just a part of us. And then we do notice it when it's not there. Because you're just feeling so nicely calm out of that. And that spot and that place of much more stillness—sort of a natural inner stillness—you certainly make wiser decisions.

Like for example, what I've noticed is I have got to set more time aside on my calendar to exercise. I never think about doing that when I'm all stressed out. You just think of all the stuff you have to get done. But when you're still like that, you actually start making these healthy decisions and choices. So I actually think it has quite a profound effect, just the effect it has on anxiety in a person that would consider themselves normal and healthy.

Dr. Hicks: Right. And you think anxiety's the number one medical diagnosis used. And it's the number one things that medications are used for. So obviously anxiety is a huge deal.

Donna: And what about depression for people? Because that's a huge issue, too, for so many people. And I've heard you talk about post-traumatic stress disorder, too. Huge! Someone was telling us at the conference that every week or every month 220 young people coming back from the war commit suicide. Did you hear that?

Dr. Hicks: Yeah.

Donna: Huge number.

Dr. Hicks: Yeah, it's a big number.

Donna: They're shooting themselves from the post-traumatic stress disorder. This sounds like a tremendous tool for that.

Dr. Hicks: Right.

Donna: Could you talk about that a little bit? That and depression.

Dr. Hicks: Well, there's a book that's written by an Israeli scientist. And it's about the endocannabinoid system and what he looks at with anxiety, fear, and how that goes out of control. And part of that is malfunction in the endocannabinoid system. And that's what allows PTSD to form.

Two people can go and have the same experience. And one's endocannabinoid system is working well and they just release that as, "Oh, okay. This happened. I made it through. I'm okay." And that's that. But for other people, they get in this cycle between the prefrontal cortex, the amygdala and the hippocampus that they can't let that go. And it's like they keep reliving it and they can't release that fear. And that's really what PTSD is.

So helping with the endocannabinoid system and working with that, you can help people release PTSD. And it gets them to a place where they can see, "Okay, this really is in the past. It's not something that's re-happening every day." And the whole thing with those sensory issues and that limbic system is whether you think it is true or it is happening when you cross that boundary, then even things that you imagine are as real as if they were happening right at that moment.

Donna: That means that it would be very valuable for anyone who suffered trauma in their life, including loss of a child, just any of the many tragedies that can form in life. And probably sexual abuse in young women and so on. They're adults now. But they're still remembering it and reliving it over and over. So it really would even be good for that type of PTSD. Some

people do now know that that trauma would today be labeled as post-traumatic stress disorder.

Dr. Hicks: Right. And I think this whole interaction with the limbic and sensory systems and emotions and how that's tied to thoughts and memories and smells, all that is interactive in that limbic system. And that's one of the big places that CBD really works and can be very assisting in helping with that. And I think for a lot of the kids on the autistic spectrum, this is a huge piece for them is the limbic system and what's going on there and how can we help that?

Donna: And then the parents who end up with an autistic child are under enormous stress. So as I learned about CBD and then saw you right beside me—I have a booth and you're right beside me; so I was really happy about that so I could talk to everybody all weekend—but I'm looking around at the conference through all the days of the conference and I'm thinking, "Every single parent here needs to be on this CBD."

Dr. Hicks: Yeah. That is a stressful life.

Donna: But, you know, it would probably save a lot of marriages and make parents a lot better parents because we just wouldn't be reacting to the stress in our life. And we wouldn't be yelling at our kids and taking it out on them and taking it out on our partner when they come home from work, too. So it just can have an enormous effect on the world. I'm so excited about it!

Dr. Hicks: Yeah. The impact can be huge. Because you think about what it's been shown to do is modulate sensory input and the attachments of what we put to that thought or that idea or that event. So if you can downregulate that and you take the edge off of that, there

would be a lot more happy people. I really believe that.

Donna: Well, I think you're going to be an extraordinarily busy person. If we were doing a radio show right now and it were a call-in show, the board would be lighted up with people wanting to talk to you. And I know that you're already staying on the road a lot, educating a lot of doctors. But you can't be everywhere. So how would people find out more information? Because we don't want to wear you out but your job is so important to get this information out. What would you recommend we do?

Dr. Hicks: Well, they can go to my website. I'm getting ready to put a bunch of information up there. If they want to contact me, they can go to JohnHicksMD.com. If they have questions, they can send it to reception@JohnHicksMD.com. And we'll get back to them and do what we can do to help.

Donna: That's fantastic. Yeah. Thank you so much. Well, I feel very blessed to have you and Betsy in my life for the work you do and that you will be doing for a long, long time to come. I've never been so excited about a supplement showing up like this before. And I'm thrilled that it's you that's behind it because you also have this great understanding of the value of diet and fermented foods, too. So it's super exciting for me.

Dr. Hicks: I think it all fits together so well. It's just another layer to that that we've been blessed with. And now we can start to see and understand. To me, that's really the whole thing is the information is now available, people are starting to ask questions. And now it's just going to move forward.

Donna: Absolutely. Well, we've got over a million people that are listening. And they aren't going to

know what the CBD is at first. But they're going to be really excited that they listened to this interview. So thank you very, very much.

Dr. Hicks: Well, you're very welcome. You have a wonderful day.



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