



**The hidden source of better mental health: the  
endocannabinoid system; what it is and how CBD can help  
with Dr. Hyla Cass**

**[The MindHealth360 Show](#)**

**Episode Transcript**

Host: Kirkland Newman

Guest: Dr. Hyla Cass

## The MindHealth360 Show - Dr. Hyla Cass

Dr. Hyla Cass:

... anxiety, depression, these are all signs of endocannabinoid deficiency; migraines, PMS, menopausal symptoms, poor memory, blood sugar imbalances, cardiovascular issues. All of these can be affected by the endocannabinoid system.

Kirkland Newman:

Welcome to the MindHealth360 Show. I'm Kirkland Newman. And if you, your loved ones or clients suffer from mental health issues, such as depression, anxiety, insomnia, poor memory, poor attention, mood swings, exhaustion, et cetera, I interview the leading integrative mental health practitioners from around the world to help you understand the root causes of these symptoms, many of which may surprise you and suggest solutions to help you heal. If you like this interview, please do subscribe and forward to others who might find it helpful. If you want further information, please go to [www.mindhealth360.com](http://www.mindhealth360.com) or find us on social media.

Kirkland Newman:

Dr. Hyla Cass, welcome to the MindHealth360 show. I'm so excited to have you here. You're one of the pioneers of integrative mental health and functional medicine psychiatry. And you are, yourself, a psychiatrist, but you specialise in functional medicine, psychiatry, integrative mental health, and you've been doing it for a long time. You're a frequent guest on radio, TV, podcasts, and documentaries. You've written several books of which are very popular, *The Addicted Brain* and *How to Break Free, Natural Highs* with Patrick Holford. And one of my personal favourites, which is *Eight Weeks to Vibrant Health*.

Kirkland Newman:

You've helped thousands of people enhance their mind and mood as well as overcome addiction using targeted nutritional supplements. And your latest edition is CBD, which is the topic of our podcast today, which enhances the effects of all the other nutrients. And your website is [www.caasmd.com](http://www.caasmd.com). So I'm really glad to have you here, Hyla. You're the godmother of functional medicine in many ways. And what I'd like to ask you is, first of all, how did you go from being a conventional psychiatrist to being drawn to functional medicine psychiatry?

Dr. Hyla Cass:

I don't know if I was ever conventional because who I brought to my residency and to psychiatry was an unconventional approach to things. I've always thought outside the box. So when we were observing, in the residency even, that there was a problem with side effects with medications, and that actually psychotherapy worked very well, there was neurofeedback, there were other means for handling mental health issues, rather than medication, I went in that direction. And then I began to look at nutrition, began to follow Abram Hoffer, Carl Feifer and some of the early greats. And there was very little in those days. I mean, really little. What we have now are many organisations that teach integrative psychiatry, functional medicine. It's great, much better. We still don't have enough practitioners, but there's hope now. There is much more penetration into the general knowledge base of a more integrative approach.

Kirkland Newman:

I agree. I think it's really growing in a big, big way. And I think there's still a disconnect between the research and practice, as you point out. And I think there are not enough psychiatrists who are trained in this. And it's still not mainstream enough, but it's definitely going in that direction, which is great news

for everyone. So what I'd love to discuss is your real specialty you've developed over the years, which is essentially CBD oil and the endocannabinoid system. And very few people I think know about the endocannabinoid system. I mean, it was a relatively recent discovery if I'm not mistaken. In the early 1990s, the endocannabinoid system was discovered. So can you tell us a little bit about this system and why it's important for mental health?

Dr. Hyla Cass:

It's so interesting because it fills the entire body. Every cell connected to the endocannabinoid system, and yet it was hidden in plain sight. We didn't know it was there. Once it was discovered, it became apparent what it does and it's a master balancer and communicator. So it actually helps all the cells to communicate and all the systems to communicate; hormones, the immune system, cardiovascular, GI, the brain and nervous system. All of these can communicate with each other by means of the endocannabinoid system. And its role is not just communication, but actually to create balance and calm, and it works with the parasympathetic nervous system. There's the sympathetic fight or flight, where we're really on adrenaline and we're pushing, and too many of us are in that phase too much of the time. And the parasympathetic nervous system is calm, relax, rest and digest and that's what the endocannabinoid system does. It works as part of the parasympathetic nervous system to help us rest and restore.

Kirkland Newman:

That's very interesting. How does it do that? Exactly. I mean, what is the mechanism through which it works? Is it like the neuroendocrine system? Does it work in the same way as hormones and neurotransmitters, or is it slightly different?

Dr. Hyla Cass:

It does. It works with them.

Kirkland Newman:

Okay.

Dr. Hyla Cass:

And what's interesting is that we actually have our own, what are called endocannabinoids, which means inner cannabinoids. We make them. We make our own, with the equivalent of a phytocannabinoid, which is a plant based cannabinoid, and then there's the endocannabinoids. And the ones that we really know about are anandamide and 2-AG. And anandamide, by the way, means bliss in Sanskrit, so that was discovered when we learned about THC. It was the THC in cannabis that made people high, that made them feel good, and it influences the endocannabinoid system.

Kirkland Newman:

That's so interesting. And so in terms of the way it affects our parasympathetic nervous system, so it helps us deal with stress. Is that correct? So would you put it on a par with say GABA, which is the calming neurotransmitter? Does it have a similar impact in the sense that it calms you down? Is that how it works?

Dr. Hyla Cass:

Well, it does a lot more than that because it interfaces with all of the neurotransmitters. So if you need more calming at a particular time, it will bring out the GABA and maybe serotonin. It's very active on serotonin receptors. There's excellent research on that and it interacts with the 5-HT1A receptor. So it influences GABA, it influences serotonin, it influences dopamine, which is for focus, concentration, motivation. And if you are not manifesting enough of that, you're going to be sitting on the couch and you can't move. That's one extreme. So what it's going to do is balance. It will actually shift in favour of a more active neurotransmitter like dopamine. So it creates balance among all the neurotransmitters or chemical messengers that I just mentioned.

Kirkland Newman:

That's amazing. So it works almost like an adaptogen, like the herbs like Ashwagandha and Ginseng, which basically if your neurotransmitter is too low, it'll increase it. And if it's too high, it'll lower it. So it sounds like that's incredibly useful. And what are the things that get in the way of the smooth functioning of the system, which sounds incredibly important for our neurotransmitters?

Dr. Hyla Cass:

Well, what happens is there are many people who have a low endocannabinoid system, or endocannabinoid deficiency. And it's becoming more common as we have more and more stress, and stress tends to lower the endocannabinoids. It can be stress, it can be dietary deficiency. Because actually just like all the neurotransmitters are made from precursors, you take tyrosine to make dopamine, or triptafen to make serotonin, by the same token, essential fatty acids, which turn into arachidonic acid, will be a precursor to CBD, to the endocannabinoids. And CBD is a phytocannabinoid, which we'll explain in a minute too.

Kirkland Newman:

So CBD is an exogenous cannabinoid, essentially, whereas the anandamide and the other one that you mentioned, which I think was the 2-AG. Exactly. Those are endogenous and CBD is exogenous, is that correct?

Dr. Hyla Cass:

Right.

Kirkland Newman:

Yeah. And in terms of mental health, so what are the possible manifestations to our mental health of malfunctioning or less than optimally functioning endocannabinoid system? I know it leads to all sorts of mental health symptoms. What are the ones that you think are the most common?

Dr. Hyla Cass:

Well, believe it or not, most of them. For example, post-traumatic stress disorder. What's amazing is that people who have a good level of endocannabinoids in them are in a way protected from post traumatic stress disorder, as opposed to those who have a low endocannabinoid system or a deficiency, and they will be more prone. So we don't have lab tests that we can use, although they are used in research. They did a study with people who had been exposed to the 9/11 tragedy and a number of them developed PTSD, another group did not. And what they determined was that the group that did have PTSD had very low endocannabinoids. Now, what you and I would do would be give them some CBDs to raise the

endocannabinoid system, but they don't go that far. Studies are studies. So it always frustrates me when I see that there's such an obvious path to help these people, the so-called research subjects, and it's not done.

Kirkland Newman:

Yeah.

Dr. Hyla Cass:

But that would be the solution there. So anxiety, depression, these are all signs of endocannabinoid deficiency, migraines, PMS, menopausal symptoms, poor memory, blood sugar imbalances, cardiovascular issues. All of these can be affected by the endocannabinoid system, and can be improved, when you have a low endocannabinoid system and then you have these symptoms, they can be corrected with the right use of phytocannabinoids, such as CBD.

Kirkland Newman:

That's fascinating. And so one of the challenges I think of functional medicine is being able to identify exactly what is the root cause? And so is the cause of your depression and anxiety and poor memory, could it be because you have a low endocannabinoid system, or it could be something else? But then I think back to the question about what causes, or what could be contributing, to a low endocannabinoid system are the same causes that could be contributing to hormone imbalance, neurotransmitter imbalances, gut issues, et cetera? And so I think those are the key, essentially. So you mentioned stress. So if you're chronically stressed that could lower your endocannabinoid system. Is there a genetic component to this?

Dr. Hyla Cass:

Yes, there's definitely a genetic component, but as we know, it's really the epigenetics that counts. That is we can influence how our genes are expressed. We are not stuck. We're not stuck with the genes that we were given, but they're the pattern, but we definitely can overcome that pattern by providing the right precursors.

Kirkland Newman:

Understood. And other things I think I've heard you mention in the past is infections can also lower the endocannabinoid system, inflammation, gut issues, and poor nutrition. And these can all have a negative impact on our endocannabinoid system. So really the same things as a lot of other things that get our metabolism or our neuroendocrine system out of balance also affect the endocannabinoid system. And so if this happens, you can then prescribe an exogenous, a cannabinoid, which you mentioned as being CBD. So tell us about CBD, how it works. I mean, it sounds incredible and you are very experienced in administering it. What is it and how does it work?

Dr. Hyla Cass:

CBD works on the CB1 and CB2 receptors, and those are part of the endocannabinoid system. What's interesting is they don't exactly act like a neurotransmitter usually does, which is to go to the receptor site. Instead, it actually prevents the breakdown of your own natural anandamide or 2-AG. So it influences the enzyme, which is FAAH, F-A-A-H. And it stands for a much longer chemical name, which I

won't say, and you don't have to pronounce it. So it influences FAAH and that allows more anandamide to stay intact and working on the CB1 receptors and CB2 receptors.

Kirkland Newman:

So it's so interesting. It works almost like an SSRI in the sense that an SSRI will prevent the reuptake of serotonin. The CBD oil is preventing disintegration of the anandamide molecule. Is that how it works?

Dr. Hyla Cass:

That's exactly how it works.

Kirkland Newman:

Okay.

Dr. Hyla Cass:

Right.

Kirkland Newman:

Fascinating. And so essentially what you're doing is you're boosting the levels of endocannabinoids by providing the CBD oil. And where is this from? When we think of CBD, we think, oh, pot or marijuana, illegal substances, legalising substances. So how does that fit into this whole debate, the CBD oil?

Dr. Hyla Cass:

Great question. So they're both from the cannabis plant and the cannabis plant has cannabinoids in it. And the biggest one, the one that takes up the most volume is the CBD, followed by THC. And then there are 100 other cannabinoids, and there are also terpenes which have a medicinal effect. And the terpenes are the part of most plants, all plants, at least medicinal plants that have the scent and the medicinal value. So the smell of lavender, and it is very calming. Oregano is very healing and has a very distinctive smell. I mean, it smells like pizza, or just pizza smells like oregano. So we have CBD and these other cannabinoids. And they're all from the cannabis plant, but there's the hemp branch of this family. And the hemp branch of the family has been bred to grow long, stocky plants. They were originally, and still are, bred for the use in paper and cloth, and many, many, many uses. And hemp had been grown for many, many years until it was prohibited during the prohibition against marijuana. There was Reefer Madness and all that history of the government turning against the use of marijuana. So, that's a whole other story. So these days, the marijuana that you get, the pot, which is from cannabis, has been bred to be very high in THC, because the whole point of it is to get people high. Unfortunately, and I say unfortunately, because it's been bred to be so high in THC, that very often it way overshadows the CBD. And as a result, a lot of people, particularly younger people, have a problem with it because the THC can be actually activating.

Dr. Hyla Cass:

I have seen cases of people who smoked some pot and became quite agitated and maybe even paranoid or violent and ended up in an emergency room. Then they get a shot of medication. Then there's a whole series of events that happen from that. They're labeled potentially psychotic, or they're labeled manic depressive. Oh, this has uncovered a manic depressive issue. So now they're put on meds. They're put on a series of cocktail of meds, and it's really quite a disaster, because these are often, as I said,

young people, college age perhaps. And it can actually ruin their university career and their lives. And what these people need is actually CBD to counter the THC. What CBD does is block the THC at the receptor site so that the THC can't have its influence.

Dr. Hyla Cass:

So it undoes the influence, but at the same time, it's providing something. It's providing that calm and balance. So you reverse those really awful effects of the anxiety and paranoia and fear. And that could happen fairly quickly. And then the individual is not doomed to be on medication forever, because generally when people are put on psych meds, it really ends up being a life sentence. And I say a life sentence, and I say it in a very dire way because I mean it. I've seen just too many people who have been on meds long term, the meds are not working. And at the same time, they're having side effects and they can't get off the medication because it's difficult. It has to be withdrawn slowly and using the right nutrients to help it along.

Kirkland Newman:

Completely. Yeah. I mean, that's a huge problem and withdrawal is very, very tricky, so that's fascinating. Why have the plants been bred to be so high in THC, as opposed to CBD? I mean, it used to be presumably that the ratio of the natural plant is perfectly balanced so that you don't have those nasty effects. Why has it been bred to be so high in THC?

Dr. Hyla Cass:

Well, what do you think?

Kirkland Newman:

Yep.

Dr. Hyla Cass:

It's because it sells, that's business. People want to get high and the more THC you have, the higher you get.

Kirkland Newman:

Interesting.

Dr. Hyla Cass:

So, that's how it goes

Kirkland Newman:

Understood. In terms of getting hold of the CBD, what's the best source of CBD? How do you know that it's good quality? And how would you take it, and what doses?

Dr. Hyla Cass:

Well, you want to get it from a reputable supplier, someone that's been around. You want to have them supply what's called a certificate of analysis, which shows that what's in it is what's supposed to be in it and not anything that's not supposed to be in it. And one of the issues with the hemp plant or with the

cannabis plant is that it's a concentrator. So if there is any toxicity within the soil, any old chemicals from fertilisers, pesticides, whatever's in the soil, heavy metals, it's going to come into the plant, and you're going to ingest it. So you want to have it organically grown and not just organically grown from recent times, but to have soil that has not been exposed to all of these toxins. And that will show up in a certificate of analysis, so that's one thing. And you want, as I said, you need to know your supplier. It's readily available in the U.S. I don't know what the situation is in the UK. What is that?

Kirkland Newman:

You can buy it online and there are various sources, but obviously you have to make sure that it is a reputable source. It is available here, but it's very difficult to tell because a lot of it is manufactured differently. And I think what you mentioned about the certificate is really important because the quality and the concentration varies tremendously.

Dr. Hyla Cass:

Yeah. I mean, for my own brand, I chose a specific cultivar from a group of farms in the Midwest. It's organically grown, then taken to the plant where it's extracted and mixed to my specifications. And it includes MCT oil rather than hemp oil, which is heavy and grassy tasting, which I don't like. And I did it to my own taste. And I added this essential lemon oil to give it a lemon flavor, which makes it nice, pleasant tasting. So it's been well received and it works quite well. It has a good complement of cannabinoids, terpenes, and we can actually add more terpenes to order, so it's quite versatile.

Dr. Hyla Cass:

And by the way, we're referring to CBD, but it's really hemp oil extract. Because CBD is only one of the cannabinoids. It can contain a trace of THC. By law in the U.S., it has to be under 0.3%. In the UK, it's less than 0.2%, so there's a bit of a difference there and it's really arbitrary. I mean, really? And my preference is actually to get the full spectrum that does not have that trace of THC taken out, because once you are working with the product and processing it, there's collateral damage. When you remove the THC, even though it's just a little trace, you're also affecting some of the other components. So I'd like it to be as close to nature as possible.

Kirkland Newman:

And so you have basically the full spectrum, which is everything. Then you have broad spectrum, if I'm not mistaken, which is the THC taken out. Is that correct?

Dr. Hyla Cass:

Yeah. But in the process of taking out the THC, I think some of the other components come out with it. And then for people who absolutely cannot have any, not even a trace of THC, they should get the isolate, the THC free isolate, because interestingly, even though it's such a tiny amount, it can accumulate in the fat cells. And if individuals are subject to random drug testing, it could be a problem because THC is going to show up.

Kirkland Newman:

Absolutely.

Dr. Hyla Cass:



And it's not that they've been smoking pot, it's that it's an accumulation from CBD that they've been taking medicinally.

Kirkland Newman:

Understood. And then in terms of amounts, I mean, what's a safe amount to take?

Dr. Hyla Cass:

It's so interesting. It's so individual. It doesn't have to do with your body weight, age, condition. It's so arbitrary because the endocannabinoid level that you have is going to be your own individual level. And there's such a range. So what I recommend is to be on the safe side, start low and slow. So you'd get a 750 milligram bottle. A 750 milligram bottle means that each milliliter contains 25 milligrams. And you can start off taking five or 10 drops and look to see if your target symptom improves and keep adding more until you actually get some relief.

Kirkland Newman:

Understood. And in your experience, and maybe you could talk us through some case studies, but what is the key symptom relief that you've experienced with your patients or people that you've helped in the past with this? Stories that stand out as being, wow, that really worked?

Dr. Hyla Cass:

Well, a lot of different conditions. Now, I can't make disease claims because, this is FDA based, by making a disease claim, that's illegal because you have to be a drug and have gone through all kinds of testing and clearance and whatever, and supplements just aren't there. And they only can have structure and functioning claims. That being said, what I've observed is people with migraines who have to take medication, by the way, the migraine medications are pretty rough on the system and don't always work. But there was one case of a dad who wrote to me and he said his son who's 15 had been having migraines his whole life. He was missing quite a bit of school each month. And he actually interviewed me on his radio show and thought, he'd give it a try the next time his son was starting to get one, because generally people have an aura beforehand. So he gave it to him and, lo and behold, he didn't get a migraine. It aborted it. So he thought, well, maybe beginner's luck, maybe placebo. So he tried it again and it worked again, so he was sold. Now, this is an amazing thing to happen to a young man. I mean, here, he was missing school and being miserable and migraine is such a difficult and tricky condition to treat, and there it was. I mean, so that's one instance. I've had people in pain, somebody with back pain, who, again, didn't want to take opiates because it clouded his mind. He didn't want to become addicted, all of those reasons not to take opiates. He'd never taken CBD. I gave him CBD, and very quickly we figured out his dose, and he was fine. He was able to walk around and to sit and to do his normal activities without pain, as long as he was taking the CBD.

Kirkland Newman:

Wow.

Dr. Hyla Cass:

But really, it was the hemp oil extract.

Kirkland Newman:

Amazing. And then I also, you were talking about somebody who had dementia and that it's quite good for cognition and memory, quite an extraordinary story. Tell us a little bit about that, because that sounded extraordinary.

Dr. Hyla Cass:

Well, it's interesting. This family brought their mother to me and she was not present. She was dozing off. She couldn't really answer my question. So I interviewed the family, not her. And it turns out she was disoriented, and they would take her to a restaurant and she'd insist she'd never been there before. When in fact, it was a place she'd been to a lot, and she had her favourite foods there. She had no recollection of anything. And she was also on some psychiatric medications.

Dr. Hyla Cass:

So what I did was I gave the family a schedule of gradually reducing the medication and added in some of my hemp oil extract. And what happened was, first of all, he took her off the meds a little quicker than I had planned, than I had told them. I don't think there was a miscommunication, but whatever that actually helped her not be so cloudy. But then the CBD kicked in and she began to remember things. She'd go to a restaurant and she'd say, well, of course, I remember. And when she was asked, of course, I remember this. And what's your favourite food here? Well, why are you asking me? You know that I know. She was there. She was back.

Kirkland Newman:

That's amazing.

Dr. Hyla Cass:

So, that was really very nice to get her back.

Kirkland Newman:

Absolutely.

Dr. Hyla Cass:

They were ready to put her in a home and they didn't have to do that. By the way, she was 85.

Kirkland Newman:

That's amazing. It's really interesting, but how do you think the mechanism works? I mean, is it anti-inflammatory? What do you think is the key? Is it its effect on the neurotransmitters? Is it the combination? What is it about not just the CBD oil, but the effect obviously of the CBD on the endocannabinoid system? What's the mechanism?

Dr. Hyla Cass:

Well, it's interjecting itself into all these systems and making them work better. That's all I can say. There are a lot of fine points that we don't know about, and there's increasing research. Like I said, we know that it works on the 5-HT1A receptor, which is a serotonin receptor, so it enhances serotonin that way. It works to reduce inflammation. It works on the immune system through the CB2 receptors, primarily in

the gut. The majority of our immune system actually resides in the gut. It also works with the microbiome. So there are a lot of mysteries that we're gradually uncovering. So we don't know it all, but we do have a lot of research on the effects of CBD.

Dr. Hyla Cass:

And by the way, in research, in the studies, they use isolate because research is generally using a drug model. And in a drug model, you don't want to have things as they appear in nature. That's unfortunate and doesn't really make sense. You can do an observational study, but if you do a double blind placebo control trial, you're going to use isolate, which requires much higher doses. And that's not so good because why use a really high dose when a little bit of full spectrum will go a long way?

Kirkland Newman:

Absolutely. And then if you take the CBD oil, can you take it for a long period of time? I mean, can you take it to support your system for a long time? And also if you do that, does it then reduce your own ability to create your own cannabinoids, maybe blunt the receptors or create ...

Dr. Hyla Cass:

Well, that's a great question and it's really the opposite. What happens is it retrains your own system. So what we find is that once you've gotten your level and you take it regularly for a while, you can actually cut back and observe. And in some cases, people find they only need a booster once in a while. They don't need to keep taking it. You've retrained your endocannabinoid system, you've brought it up and things begin working again. So it's quite wonderful because it not only works in all these areas, but you don't have to deal with dependency, tolerance or withdrawal that you do with so many other really synthetic products, medications, basically.

Kirkland Newman:

So you can take it for a long period of time, but then you can taper off and not really notice the difference, but what's happened is that you've kick started your own endocannabinoid system. That's really interesting. And would you advise to take it, for instance, in times of intense stress to support yourself during these times of stress to keep everything working optimally? And then if you're less stressed, you can reduce? Is that how you would use it?

Dr. Hyla Cass:

That's exactly right. Yeah.

Kirkland Newman:

Yeah. Okay. There are a lot of young people and maybe older people too who self-medicate and they smoke weed because it makes them feel better and it calms their anxiety. But then the problem is it can also create more anxiety down the line. How would you recommend people using CBD if they're having quite a lot of anxiety or can't get off the couch, because they've lost motivation for everything through smoking marijuana? I mean, I've heard this a couple of times, people who chronically use marijuana to self-medicate end up having a lot more, or conversely, a lot more lethargy and lack of motivation. How would you use CBD oil in those cases?

Dr. Hyla Cass:

Well, you just hit the nail on the head. They need CBD to counterbalance the pot, the THC actually. And I'd recommend that if they want to take THC, they may be taking too high a dose. It may be too strong of a THC, so they need to cut back. And they can find a dose that doesn't make them anxious. Or maybe they're just very sensitive. Like I mentioned earlier, there are people who are more sensitive than others to the anxiety producing effect of THC, but giving the CBD will help to neutralise it regardless. As I said, what it does is it goes between the THC and the receptor, because THC binds to the CB1 receptor, CBD does not bind. As I said earlier, remember, it stops the breakdown. It interferes with the enzyme that breaks it down, so it keeps recirculating. So what I would do is take increasing amounts of CBD, and that will help neutralise the THC and reduce the anxiety and bring the person back down to a state of calm. Or if they're lethargic and unmotivated, it will actually change the balance of dopamine or epinephrine, GABA. It'll actually rebalance their neurotransmitters.

Kirkland Newman:

Fantastic. And then let me ask you about CBD and sleep because I remember taking... I have insomnia, so I took CBD to try and help me sleep and it had a really weird effect on me. And literally, I felt very calm in my body, but my mind was racing all night long, and I slept even less than I usually did. And I was very surprised by this because on the one hand I felt incredibly calm in my body, but my mind was racing. And then somebody said, well, maybe you should take the CBD in the morning rather than the evening. So I just wondered why that had had that effect.

Dr. Hyla Cass:

There is a real biochemical individuality going on. And for some people, it is more activating. Actually, for some people, if they take it during the day, it helps them to focus and concentrate. And if they take it at night, it helps them to relax and go to sleep. So again, it has that homeostatic effect. In your case, it sounds like it's activating in a way that's not pleasant if you want to sleep, but it's probably good if you take it during the ... Have you taken it during the day and found it helpful?

Kirkland Newman:

I found it helpful. Yeah. It increases focus, but in a calm way.

Dr. Hyla Cass:

Right. So it would not be your first choice for sleep. Or you can augment it with some GABA, or theanine, or maybe tryptophan, and see if that helps.

Kirkland Newman:

And for instance, for ADHD, because I do know somebody who self medicates his ADHD through smoking a lot of weed. And I'm wondering if CBD in fact would be a good way of increasing focus and calm, because I mean, ADHD, they say is low epinephrine and low dopamine. Would the CBD help in that situation? So instead of smoking to try and self medicate and increase your dopamine and your epinephrine, you take CBD to balance out those neurotransmitters.

Dr. Hyla Cass:

Yes. That the answer is yes.

Kirkland Newman:

Yeah.

Dr. Hyla Cass:

And we don't even know in each case which it is. In some cases of ADD and ADHD, there's actually a deficit in GABA or serotonin. I think maybe we used to think more in terms of it was just the dopamine system, but it actually can involve all of the neurotransmitters and in different individuals, different ones.

Kirkland Newman:

Fascinating.

Dr. Hyla Cass:

Inositol helps too if you take that. I add that in for ADD, for OCD. Also, CBD is really good for obsessive compulsive disorder, but adding in inositol, up to 1600 milligrams, which is called a secondary messenger, can also help.

Kirkland Newman:

That's a really interesting idea. So inositol plus the CBD to help with the focus and the calm, that's fascinating. You are obviously an integrative psychiatrist and CBD is one of the things you've gravitated towards, because I think you've found such wonderful results, but what are the other things? I mean, I know that there are so many other things in your toolbox in terms of helping people who have depression or anxiety or poor concentration or poor memory. What would be your top five tips, obviously including the CBD, to help people from an integrative perspective with their mental health symptoms?

Dr. Hyla Cass:

Sure. Well, to begin with, I think diet and lifestyle are extremely important. That's the base. You can't just take anything, including CBD, wonderful as it is. You really need to be eating the right kind of foods, eliminating the bad stuff, finding out if there are any food sensitivities or intolerances and handling that. So it's exercise... So we have diet, exercise, social relationships are important, support system. We really need connection, and this past year that's been lacking. And we've had a great increase, very sadly, huge increase in mental illness and even suicides.

Kirkland Newman:

Huge.

Dr. Hyla Cass:

So really tragic. So there are other modalities we can use. For example, neurofeedback, biofeedback, but particularly neurofeedback, which is biofeedback for the brain. Electrodes are placed on the scalp, and you retrain your brain to rebalance itself and form new pathways. There's tapping, or EFT, somatic experiencing. There are a lot of different modalities for dealing with mood issues and particularly post traumatic stress disorder, which may underlie a lot of the mental illness. It could be old, old peak PTSD from something you've even forgotten, but it sits in the background like a bad computer program. You don't know about it, but it's messing up your bio computer. So dealing with PTSD is very important, and it turns out the CBD, it works on the amygdala, which is the fear center. And what's interesting is what it

does it help to mitigate the fear factor. You don't lose the memory, it doesn't obliterate the memories. You'll have it, but it's not associated anymore with an intense, emotional reaction.

Kirkland Newman:

That's very interesting. And in the context of all the psychedelic research, so the research that's just come out on MDMA and PTSD, which has shown that it's incredibly helpful for PTSD. And obviously we're exploring psilocybin and ketamines and all sorts of compounds that have been banned. How would CBD fit into that? And do MDMA and these other compounds act on the endocannabinoid system? Do we know that?

Dr. Hyla Cass:

That's an excellent question, and I don't know.

Kirkland Newman:

Yeah. Yeah. [crosstalk 00:42:43].

Dr. Hyla Cass:

I would imagine it does.

Kirkland Newman:

Yeah. Agreed, because I mean, there is a resurgence of using these natural but banned substances for mental health treatment in light of the fact that traditional psychiatric drugs are not really working. And so there's an effort and there's been much better results in fact with these other compounds. But I guess CBD is much more readily available and you can take it without having the help of a therapist. And I think, whereas, first of all, the others are often banned substances, but also it's much more helpful to take them with a therapist to assist the journey to healing. Whereas I think CBD can be seen more as a nutritional supplement, almost to rebalance your system. Yeah. Fantastic.

Dr. Hyla Cass:

Yeah. Very good distinction and very important. In the old days, people just taking LSD at a rock concert, that's not therapeutic. Therapeutic use of psychedelics is really the preparation, therapeutic preparation and then the journey, the guide it could be, and the guides are there. They may not intervene very much, but they're there.

Kirkland Newman:

Yeah.

Dr. Hyla Cass:

And then afterwards, to integrate the experience, to talk about it over a session or two or whatever the protocol is. And right now it's all in research protocols and it's still not legally available in all places. Although some places such as Denver and Oakland, Oakland, California, Denver, Colorado have legalised psilocybin.

Kirkland Newman:

Wow. I didn't know that, that's fascinating. Well, I mean, I think that the danger is using it for recreational purposes versus using it for therapeutic purposes. And I think they're very different. And in some ways, I guess it's the same distinction as CBD oil taken as a nutritional supplement versus smoking weed, or to get high. But these all have their place, but I certainly think CBD sounds amazing. And what do you think the future is for CBD? How do you see it? Do you see it growing? And what about the legalisation of pot, and how is that going to impact things?

Dr. Hyla Cass:

Well, the Farm Bill of 2018 was very helpful because it made it legal in each state, but federally, CBD is still lumped together with all of cannabis, which includes marijuana. So until the FDA decriminalises or legalises THC, CBD is still under the shadow of it.

Kirkland Newman:

Yeah.

Dr. Hyla Cass:

So hopefully that will happen soon. Well, there's always legislation pending, so I'm following it and you're following it, and will let everyone know when it happens.

Kirkland Newman:

When it happens. And one final question, Hyla. What about for children? There's a huge increase in anxiety and mental health issues amongst children, focus issues, anxiety, mood issues. I mean, this might be slightly uncomfortable, obviously you don't want to recommend things, but would you use CBD with children?

Dr. Hyla Cass:

Oh, yeah. Yeah, CBD is great for kids. You just titrate, you start low. And just as with an adult, you gradually build up as you deal with the target symptoms. And I don't think it's used in isolation. Being a functional medicine physician, I really have a whole armamentarium. Doing diet, lifestyle, other supplements. And CBD just happens to have so many wonderful qualities and treats so many different conditions that it's my favourite, but it doesn't eliminate everything else, and that includes for children. And there is actually a whole school of practice giving varying degrees of THC in the mixture for children. And there are specialists who know how to do this. And it's been extremely helpful in certain childhood conditions, such as autism, where the moms will give varying amounts of THC and CBD depending on the day and the behaviour. So there's a lot of potential here.

Kirkland Newman:

That's fascinating because I know there's a huge increase in panic disorder, anxiety, OCD, ADD, and it sounds to me as if this could be incredibly helpful.

Dr. Hyla Cass:

Oh, by the way, if you're giving it to a child, it's good to clear up with their pediatrician.

Kirkland Newman:

Yeah, smart. Absolutely.

Dr. Hyla Cass:

And I think more and more of them are becoming familiar with it.

Kirkland Newman:

Agreed. And so, Hyla, so just to repeat, I'll put all this in the Show Notes, but we can find out more at your website, which is [www.cassmd.com](http://www.cassmd.com). And you have a lot of information on CBD there and we'll put all this in the show notes. And also in terms of your own manufacturing supply of CBD, it's all on there as well I presume.

Dr. Hyla Cass:

Yes.

Kirkland Newman:

Yeah. Excellent, fantastic. Hyla, well, thank you so much for your time. I found that super interesting and certainly makes me want to go off and get some CBD oil and try it immediately. So it sounds like a miracle wonder drug, so thank you. Or not drugs, but supplements.

Dr. Hyla Cass:

And I want to thank you for the contribution you're making. Your organisation is amazing, your website, your outreach education. You're quite a resource.

Kirkland Newman:

Aww.

Dr. Hyla Cass:

I am in awe of you and how you've done this. And I really deeply appreciate it, just personally.

Kirkland Newman:

That's so sweet, Hyla. Thank you so much. Well, I have to say I was very inspired by people like you and Kat. And you guys have been the pioneers and I think the word needs to get out there. And I think it is getting out there, but whatever I can do to spread the word of the work that you all are doing, and then it's great. Thank you for doing what you do, so thank you.

Dr. Hyla Cass:

Thank you.

Kirkland Newman:

Thank you so much for listening to the MindHealth360 Show. I hope that we've helped you realise that mental health symptoms have root causes that can and need to be addressed in order to sustainably heal. And have given you some ideas about steps you, your loved ones or clients may take to start their healing journey. Please share this interview with anyone you think may find it helpful, and don't forget to subscribe to keep up to date with our latest interviews on integrative mental health. If you want further



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