

Ep #57: Understanding the Medical Benefits of Cannabis with Dr. Dave Carsten



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Allison Watts, DDS

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Welcome to *Practicing with the Masters* for dentists with your host, Dr. Allison Watts. Allison believes that there are four pillars for a successful, fulfilling dental practice: clear leadership, sound business principles, well-developed communication skills, and clinical excellence. Allison enjoys helping dentists and teams excel in all of these areas. Each episode she brings you an inspiring conversation with another leading expert. If you desire to learn and grow and in the process take your practice to the next level, then this is the show for you. Now, here's your host, Dr. Allison Watts.

Allison: Welcome to Practicing with the Masters podcast. I'm your host Allison Watts, and I'm dedicated to bringing you masters in the field of dentistry, leadership, and practice management to help you have a more fulfilling and successful practice in life. For those of you who have been here before you may remember that you can actually raise your hand by pressing star two, and I believe I speak for everybody that's here speaking, so Dr. Dave, and Blaine is going to be speaking as well, but you guys are okay with questions throughout, right?

Blaine: Absolutely.

Dave: Definitely.

Allison: Okay, cool. I'll keep reminding you to press star two if you want to raise your hand, but you might even just write it down on a piece of paper. I am so thrilled that all of you guys decided to join us. I know that it's precious time that you're spending here to learn, and we definitely want to make it worth your while. Dave has been here before speaking with me, and I enjoyed it thoroughly last time, and I'm thoroughly looking forward to it this time. Dave has quite a nice CV, so I tried to shorten it a little bit, so we wouldn't be just doing that during the whole call, so Dave, if I miss something, or misspeak something let me know because there were some things that were previous, and some things that were current, so let me know if I misspeak something.

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Dave received his DDS from the University of Washington School of Dentistry. After 24 years of dental practice, and 13 years as faculty at Oregon Health Sciences University, and then three years at the University of Southern California he decided to enter the anesthesia program at Lutheran Medical Center in Brooklyn, New York. He's provided anesthesia services for all types of patients, and procedures in the hospital, and in outpatient settings. He has a private practice in dental anesthesia in Vancouver, Washington now. As I said he has a long CV, and has presented many times over the years on various topics, and has several publications in professional journals. He is a master in the Academy of General Dentistry, and a member of the Pacific Coast Society of Prosthodontics. He's been president of the local dental society where he is twice. Dave has also received the Academy of Dentistry Internationals. That can't be right. Is that right? Internationals Award?

Dave: Academy of Dentistry International.

Allison: Okay, International Award of Distinction for continuing education. He's a member of the Spiritual Care team at Salmon Creek Legacy Hospital. He's also a member of the Dental Commission for the state of Washington which is an appointment by the governor, and he is a chair of the Infection Control Committee, and a member of Continuing Competency and the Anesthesia and Sedation Committees. He does not represent the Commission in these discussions.

His passion is about public health, and sharing the truth, and helping people. He has also written an unpublished book Redefining Moderation: The Goldilocks Manifesto, which is about health, food, exercise, and aging which I know is a passion of yours because that's what you talked about before, and I thoroughly enjoyed that as I said. Then he also mentors a study club, The COORS Study Club for the past three years, and he does about 30 to 40 hours of original lecture per year. He is married to Sharon whom I had the privilege of hearing just a little while ago, and he has a 13-year-old son which is it Devon?

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Dave: Devon, yeah.

Allison: Devon, cool. That's a cool name. Are you still presently a Boy Scout leader?

Dave: I am, I'm an assistant scout master.

Allison: Dave really does enjoy helping people, and teaching very much. He, especially, loves teaching topics that either haven't been taught, or have been misunderstood, and that's one of the reasons we're having this conversation tonight. He loves having people understand what they did not understand before. Hopefully, we're going to shed some light on this subject. I appreciate you guys all being here. We also have tonight Blaine Chatterton whom I'm going to let Dave say a few words about, and then Blaine can sort of introduce himself, and tell us a little bit about why he's here.

Dave: Thank you, Allison. I want to start out telling everybody that I have no conflicts and interests. I have no connection to any business involved with cannabis. Cannabis is an interesting topic, and it's been smoked to treat dandruff, hemorrhoids, obesity, nausea, glaucoma, just about anything you can imagine. People have tried to, I think, perhaps they've tried to justify using it based on their problems, but you know, it's oftentimes misunderstood what it can and can't do, so involved in my research I went to some science get-togethers, and I happened to meet Blaine.

Blaine is a chronic pain patient, and I started to listen to him talk, and I thought, gosh, this is a pretty smart guy. He knows what he's talking about, and he's actually using cannabis because I don't use it myself, so I invited Blaine to come to the Study Club and speak. He was very articulate, and in fact, he's become a regular visitor, so Blaine, please introduce yourself.

Blaine: All right, my name is Blaine Chatterton. I've been using cannabis probably say 2008, so nine years as a medicine. I am not a

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prohibitionist, or an activist which tends to be where I get people a little bit upset when I talk is because most people who use recreationally want to say that it cures everything, and it's the best thing in the world which I don't agree with. How long do you want me to talk for, Dave, because I could go forever.

Dave: Well, why don't you take a couple of minutes, and then I'll talk a little more about some of the technical stuff.

Blaine: I'll just go with a little bit of my history, and roll into kind of where I consult a little bit. I was diagnosed with a brain tumor in 2003. After I don't know probably eight to 10 seizure medications I moved onto being told that I was going to have brain surgery, and was prescribed Oxycodone after brain surgery, and ended up with a chronic headache that is still today after 10 years. After the Oxycodone, I was addicted 100 percent I will say I was addicted to it, and if it wasn't for my doctors I'm not sure if I'd be here today, so we went onto headache medications. Those didn't work, so I started asking questions about pain relief in the way of marijuana. Amazingly, with two neurologists, a headache neurologist, and an epileptic neurologist their only concern for me was that I had a safe place to get it, and really didn't care how much I was going to use, or how I was going to use it, and that's where I started my adventure of smoking marijuana in 2008.

I quit smoking in 2009 after about a year-and-a-half of smoking. I live with a chronic headache, so smoking marijuana was counterproductive because it caused me to have coughing. If anyone is familiar in that line smoking does make you cough, so if I was coughing it counter reacted my headache, made it worse, so finally I moved onto other avenues, and that's basically the way I think of using cannabis is it shouldn't be smoked unless you're terminally ill.

Let me go onto a misconception. I think this is the best thing for this audience we're talking with. Misconceptions I run into a lot is it's a miracle cure. There's nothing out there that says this will cure anything. Currently

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the research double-blind, or otherwise, is not available for us to say that this in any shape or form it is currently in will cure anything. Zero deaths is another misconception that I get in a conversation with people, and kind of rub elbows with. I know of people that will use cannabis, and do something stupid, and they end up hurting themselves, injured, and even death, so the misconception of zero death is shaky. It's a very low percentage.

CBD is something that you all probably on the line have heard about, and seen it on television, CNN, Facebook, news articles. For the most part the CBD that's available on the Internet isn't like you see on television. It's usually done directly from the industrial hemp plant, and not from the cannabis plant. Overdoses. Overdoses simply means taking more than recommended amount, and I've overdosed on edibles on a number of occasions just realizing that at a certain point that I had a little too much in my system. I had a phone call just on Friday from a gal whose probably 60 years old, and has fibromyalgia and cancer. She was taking edibles, and she called me because she had my number because she was very uncomfortable about how high she was.

Addiction or habit really comes down to about three to five percent actually do get addicted to cannabis. It becomes more of a habit forming if you smoke after you eat, or you smoke after the kids go to sleep, or whatever your habitary issues with cannabis are it's more in the habit, but people do get addicted to it. The cannabis plant that we have today is nothing like the cannabis plant that was around 2,000 years ago when people thought that smoking marijuana does no harm. The marijuana that was smoked in the '60's, '50's, '60's, 70's was three to 11 percent. Today's cannabis is seven percent on the low up to 32 percent, so you're not smoking the same plant, or consuming it, smoking it, or anyway you would bring it into your system. Today we have things that weren't around even when I was a teenager which was in the '80's, and these are concentrates that are dabbed, whacked, shatters, 710. These things are anywhere from 65 percent THC up to 99 percent THC.

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I have never come across anybody that's looking for a medicine that uses any of these. I mean, these are strictly recreational let's get as high as we can. Medical marijuana dispensaries another misconception. I would say most of these are liquor stores because they really don't provide any medicine, and there's only out of about 80 of them here in Portland I have visited I would say there's only two or three of them that actually try to provide a medicine.

Allison: Wow.

Dave: That's a lot, Blaine.

Blaine: I can go onto some of the consulting that I do which is about 10 bullet points I could just go through those real quick if that's what you guys would like.

Dave: Sure.

Blaine: Generally, when I talk to people which I'm going to be talking to a cancer patient tomorrow I generally ask them what they want as a result of using marijuana. Most of the time when I ask this question it's already answered before I ask it that is how do you wish to consume? I would say 95 percent of the people that are ill that I talk to the first thing they say is I don't want to smoke. I generally reply because of where I'm at in my life with using cannabis I generally reply with great, that's not the method I choose, and I don't think it's the best one for you.

This line is usually where I get myself in trouble with recreational users. I believe only the terminally ill should smoke marijuana daily. Your recreational user can smoke a joint once a week, and probably do very little, or no harm to themselves in the long run, but if you're going to use it on a regular basis on a daily basis one joint, two joints, or however you're consuming it the terminally ill that's got six months, 18 months, two years to live they're never going to see any harm from smoking daily, so let them go.

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I suggest if you, like myself, I'm going to be using cannabis with my seizures I use it every day three times a day, so I'll be using some form of marijuana for the rest of my life, and smoking pot would have never given me the relief on the seizures that a tincture does. I've seen some amazing things from CBD tincture over any smoking method there is out there for pain, for anxiety, depression, arthritis, lupus, Lyme disease, cancer, chemotherapy, and I can go on. There's so many people I've talked to, and had them use this medicine.

I've actually talked to recreational people because I laughed with them saying that I would like to consult them on using cannabis, and the three or four that have actually listened to me have actually called me back, and thanked me because they save about 50 percent of their money because marijuana smoking about 50 percent of it is lost to the atmosphere. When you smoke anything, the atmosphere takes about 50 percent of the smoke away from you from using it in your lungs. Most of the people I talk to are coming from all walks of life, prohibitionists.

My Lyme disease, and my tremor gentleman are both brothers. They have never touched marijuana in their life. They're in their 70's. They were really hesitant to even talk to me to using it until they finally got to a point where their pain was too much, and they had heard me through other friends, and they both now use it on a regular basis, and now that I've gone into this consulting from this person to that person I get calls from all over the nation. From Houston, I've actually delivered three bottles of tincture to Houston on one person that probably buys one about every two months.

Dave: I would like to mention that Blaine, oftentimes, consults for pediatrics. You don't charge anything for these consultations do you, Blaine?

Blaine: I have so many people around me, my massage therapist, and other friends of mine who tell me why don't you charge for this. I'm a sick person. I'm on disability, and most of the people I talk to are chemotherapy, Lyme disease, lupus, fibromyalgia, cancer. I come from a background of

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commodity trading, so asking people for money or consulting is not a problem, so when it came to actually consulting people that are ill like Debora I'm seeing her tomorrow she's got breast cancer. I'm not going to charge her a dime. She even asked me three or four times. Her husband asked me what am I going to charge for consulting, and I was like I'll charge a hug, and if it works for you give me that call, and tell me how good it works for you. Those are basic what I charge people.

Dave: Wow, you know Blaine, when I got investigating on this it was because of Dr. Sakai who you've gotten to know at the Study Club, and that was way back in March of 2015 concerned about the opiate epidemic, so you remember how we got together, and we put together that program at the public library because the Study Club thought, gosh, this stuff is so important we ought to be able to make it available to the public, and the library was cooperative with that. The thing that really drove this home is that we had a full room. He had 80 people in that room there. It couldn't have taken any more people almost standing room, so I went back three weeks later when they were talking about marijuana abuse, and it was put on by the educational service district, and there were only eight people in the room, me, two speakers, a librarian, and some people from the public. That impressed me at how people were thinking that this is benign.

You know, we can talk a lot about some of the medical advantages, or possibilities that it can help people, but also there are some downsides just like you were talking about addiction. At least the American Association of Psychiatry their estimates are a little closer to maybe one in 4.8, but you know all of those numbers are a little shaky, but we do know that some people do become addicted, indeed they do, and the addiction can take a physical form of addiction where people will have withdrawal symptoms. It's one of the reasons why we want to be very careful say if somebody is on hospice care.

Normally, with hospice care you remove all their medications, and just put them on the bare minimum. Cannabis is not one of the ones you want to remove because if people were on it there were good reasons for it

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probably. Maybe they were self-medicating, or maybe they were taking it for some medical reason, but you can bring back their anxiety, or their pain, or whatever it was that they were using it in spades, so I would recommend for anybody being involved in hospice care is somebody is on cannabis don't take them off it.

One thing that might be interesting to talk about is the scheduling of marijuana. I'm sure you have some opinions on that, Blaine, but I know that this past summer there was a discussion with the FDA about rescheduling marijuana whether they should or not, and they just decided to leave it as it was. It was a Schedule I, a drug with no purpose except that it is abusive, so the use continues to be illegal in all federal institutions, and illegality is by default. That wasn't always true. For a long time it was even a medication that physicians prescribed.

Parke Davis used to produce cannabis oil, and people would prescribe it. Physicians would prescribe it all the way up until the Marijuana Stamp Act of 1937. In fact, it's interesting when it became illegal it was called marijuana when the physicians called it cannabis the American Medical Association didn't want them to make it illegal because many physicians did prescribe it, but the physicians themselves didn't really recognize what was happening because they called it marijuana instead of cannabis.

Anyway, one of the problems about even considering rescheduling the drug is that what would you do to reschedule it? If you made it a Schedule II, say like morphine then it would become illegal in all these jurisdictions where it could only be by prescription, or if you de-scheduled it which some people have suggested then it goes to the level of tobacco, or alcohol. I don't think that's wise either, so the federal government decided to just leave it where it was, and leave it in the hands of the states, so each state gets to decide what they're going to do which has led to a hodgepodge of legality and illegality of different fractions being legal in one state, and illegal in another, and even states suing one another.

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For instance, with Colorado where the surrounding states have tried suing Colorado because people pick up their cannabis in Colorado, and then go across the state line, and it creates some abuse problems in those states, especially, a problem where the folks in Idaho which is not exactly right across the border, but it's certainly across the border from Washington and Oregon there it's completely illegal. All you have to do is cross the border, and they'll arrest whoever it is.

Blaine: Where's that at?

Dave: Idaho.

Blaine: Oh yeah, Idaho is actually one of the few states that actually has a bill passed by the state to not even allow CBD tincture oil in.

Dave: Sadly, CBD has no euphorigenic potential, and it's not habit forming, although, CBD has a structure rather similar to THC it definitely is different, and it hits the receptors differently, so that it doesn't make people high, but it does have some of the other benefits as in pain relief, or relief from seizure symptoms. I know that you've been trying to use more and more CBD. Does that help you with your seizures, Blaine?

Blaine: The CBD tincture that I found in March of last year has been a savior for me because I went from about 1.2 million milligrams of seizure medication down to about 400,000, so I've cut it by almost a quarter about 25 percent of what I was taking. I'm looking at probably by the summertime I may be off of my anti-seizure medication completely.

Dave: One of the nice things about the CBD is that it has very few side effects. With CBD usually the worst thing that could happen is if you take a lot of it you get sleepy, otherwise, there's nothing that I can find in the literature of any significant side effects with CBD. THC, on the other hand is what we would call an anticholinergic which has some rather serious side effects that can affect people in bad ways. One of the things that has come up recently for people besides these anticholinergic effects

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that we're familiar with is that cannabis hyperemesis syndrome, in fact, we were thinking maybe you had a little episode of it, Blaine.

Blaine: From reading the research, and what I had December 18th I wouldn't hesitate to say that I was probably in that same picture.

Dave: Yeah, so with the cannabis hyperemesis syndrome it's kind of funny. It's people that have been on cannabis a long time, and it alters their cannabis receptors to the point where instead of saying suppressing their nausea and vomiting it actually makes them vomit. In fact, in places where it's become legal like in Colorado these cases of intractable vomiting have more than doubled where people are just puking their guts out for hours. One of the peculiar things about this syndrome is that hot showers seems to help the symptoms, so one of the key symptoms that people look for is that they take hours and hours of showers.

Blaine: I wish I would have known that.

Dave: Well, if it ever happens again.

Blaine: What I was going to tell is Adam's story. He's a young boy that's eight years old in Estacada, Oregon. When you're talking about the side effects of CBD. His father is a retired Marine didn't really want much to do with me because he knew I was coming into his house about cannabis, but his eight-year-old son has epileptic seizures of anywhere from four to five a day. His mother was desperate to try CBD tincture. After two bottles his seizures went down to about two a week, and his father which is I would say one of your ego macho men gave me a hug, and I actually saw a tear in his eye, so when you come to side effects Melissa told me the most side effects she would see is a calmness in him because he's eight years old, and maybe occasionally a drowsiness, otherwise, she said there was absolutely no side effects from CBD tincture to an eight-year-old child.

Dave: In either THC or CBD the two most common fractions there's not actually an official LD50. In other words, you could take a dose that had a 50 percent chance of killing you. The cannabinoids are some of the least

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toxic pharmacologically active items. It's about one-tenth the toxicity of caffeine as far as its ability to cause real harm just from the material itself. Now where the THC can cause a problem as I mentioned before is the anticholinergic effects, so what that means is that it's blocking acetylcholine, so what that means practically is it can cause things like the belladonna that people talk about where it makes your pupils get big. Most people that use pot their pupils get big, but there are other affects, too. They tend to get dry, but the really insidious thing is that people get tachycardia, so it's from an irritation of the sinoatrial node, and the AV node in the heart, so the heart speeds up.

That can be a problem, especially, for older people say with atrial fibrillation it can make it much worse, or a problem for younger people who have something known as Wolff–Parkinson–White syndrome. Now that can be bad. With Wolff–Parkinson–White that's about one in 350 people or so, depending upon the population that you're talking about, so if you want an example of it that would be say the 17-year-old basketball player that's playing basketball, and suddenly drops dead. Well, it's from extra wiring in the heart. Although, you can pick it up on a 12-lead EKG most of the time it's pretty below the surface, so if say that basketball player smoked pot, and then went out and played, and it really revved up his heart that might be enough for him to go right into ventricular fibrillation and die.

So do we get those attributions? Well, I know that there are case reports of things like that happening, but usually we're not attributing pot use with these anticholinergic effects simply because it seems like most of the physicians aren't really aware that it's an anticholinergic, and I think that's one of the things that dentists need to be aware of, too, that it does have those kind of side effects, so when we talk about using THC for people we have to be a little bit careful about what is their medical history, and do they have any heart arrhythmias. The CBD on the other hand doesn't do that kind of stuff.

Allison: Can I ask a question why would you use THC? Why wouldn't you just use CBD? It doesn't have the negative side effects.

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Dave: So what would you say, Blaine? They're different.

Blaine: Just look at one medical situation MS. The research shows that MS does a better relief for an MS patient for their nerve pain, for sleep, and otherwise with a 50/50 mix of THC to CBD, and when you look at cancer the research that shows where it has suppressed cancer which is not solid, but it did have about a 20 percent THC in it, so there is a lot out there in research, especially, in Israel, and other places that shows that the CBD may work better with a little bit of THC. What that ratio is we're still 10 to 15 years of knowing that to be able to prescribe something where someone can say this is going to work for you.

Dave: One of the big problems as Blaine talked about prescribing is that it's very difficult for any physician to really prescribe this stuff because where do you get it? Well, it's from these dispensaries, and it's very unpredictable what people can get from a dispensary. Just because a bottle says this is 20 percent CBD, or 80 percent CBD, or 20 percent THC, well, it's the Wild West. The regulations are not strong, so it's very difficult for people to know what they're actually getting. In fact, I think you had some testing done.

Allison: Does that look like it's changing quickly?

Dave: Blaine, have they made some changes in the regulations in Oregon? Where they trying to stiffen those rules?

Blaine: They did just recently just before November. If you were to buy cannabis in Oregon before November there was a lot of site testing, and when Dr. Ethan Russo said that in a talk I was at I was flabbergasted because I was thinking that he was saying that they were looking at it, and testing it based on what it looked like, so he repeated it three times just because it was such a wacky thought that the test places were just testing it by, hey, Bob, does it look like 13.5? Yeah, it looks like 13.5 to me. There we go let's put it down on the paper. The CBD farmer that I'm going to represent here as the tincture that I would represent for people to use he grows seven strains of plants that are all CBD. None of them have THC.

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The labs will come back constantly with levels of THC in the 10 to 15 to 20 percent range when he is guaranteeing knows these plants don't have any THC in them.

When you're talking about the Wild Wild West I come from a background of business and sales, and I also know a couple of dispensaries they'll just move whatever it is they want to sell, and put a higher percentage on it of THC because that's mainly what your recreational people are looking for is the highest high, so inventory looks like we need to move such and such Kush let's go ahead and change it from 16 percent THC to 21 percent THC, and move it over here towards the door. Regulation in other states I know in Colorado is a little bit shaky. Washington is probably the best one of the legal states right now that's actually accurate.

Allison: Are you saying they just change the label on the packaging to say 21 percent?

Blaine: Generally you're speaking of a jar with a little card next to it that gives the percentages of it, and the dispensaries know that they're not being tested truthfully on the other side, so they feel they're not doing anything wrong, and really because the law doesn't say otherwise it's kind of scary that they can get away with it.

Allison: We have a question whenever you guys take a break.

Blaine: Shoot the question.

Allison: Cool, okay. Is this Jill?

Jill: Yes, Jill, in Phoenix. I just have a question as a hygienist like this all like so new to me, and I don't really understand it because I've not really been involved in this kind of thing. I've been kind of not up-to-date, I guess, but as a hygienist I have a patient that has a medical card, or is using edible, or smoking, or whatever, what are the questions do I need to ask, and what is it going to do to their dental health as far as what I am

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concerned about as a dental hygienist, and their medical history? Can anybody enlighten me on this?

Allison: That's a great question.

Jill: Because it's new to me.

Dave: My main concern if people are using THC would be do they have any arrhythmias? If they have any history of arrhythmia then they might well end up in some trouble, so that would be the first thing. I know that there has been some association with smoking cannabis, and periodontal disease. On the other hand, you can find some research that's kind of to the contrary. I don't think smoking anything is a good idea.

Jill: Even cannabis?

Dave: Yeah, the CBD is known as a powerful antioxidant, so I don't know of any research that would suggest that it's going to have an impact on periodontal disease that way, so from a smoker you may well note some staining, and problems like that.

Jill: Yes, I've seen those on their teeth.

Dave: That's kind of obvious, but there's also a strong association with tobacco use, and smoking pot, so we know about those problems.

Jill: That's a carcinogen.

Dave: Yeah, and that's one of the areas where they get confused about what happens with the association of say lung disease, or COPD because it's hard to make the differentiation between smoking pot, and smoking tobacco, so in more recent times there have been probably a little better estimates of the effect of smoking pot on the lungs.

Jill: What about the edibles and the oils? Isn't that like the better route to go or something, but in the long run what does it do as far as I'm just concerned as a hygienist as far as periodontal, and your issues there?

Dave: I would say they'd be far better off eating it than smoking it.

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Jill: Right.

Blaine: The edibles are loaded with sugar. I make edibles myself.

Jill: Yeah, that's true.

Blaine: All the dispensary edibles are all chocolate, gummy bears, and sweet things. I have one friend whose a vegan, and she makes delicious edibles, but they are by far and away with no sugar, or anything else in them.

Jill: I've heard about the butters that people make, and they put it on their toast, or their bagels, or whatever, which is still carbohydrate.

Blaine: I will step in on that one. The butter one is a very fine edge. I infuse my own butter just for the simple fact I don't trust other people's methods because I'm looking to be healthy, but if I was to take my butter, and put it on a piece of bread which I don't eat bread, but that's beside the point it would be very difficult to put the right amount on there that's not going to be an overdose for other people, so using infused butter is a slippery edge. I have my cookies they're down to seven grams of butter in each one of my cookies.

To spread on seven grams of butter onto a piece of toast is pretty simple, and I know my butter would knock someone out for 10 hours, so if you're buying butter I don't think any dispensary will sell you butter just for the simple fact that it elutes from their edibles, so if you make your own butter the science behind making your butter isn't something you can just bake up a cake, and come out with the exact amount. Sometimes, when I make it it's much more potent, other times it's not.

Dave: I think we ought to make a distinction between smoking and edibles because there's a big difference in that when people are smoking a lot of times they want that THC they're smoking to get the fast action, and it's usually going to last maybe two to four hours before it wears down versus an edible can last much longer, so somebody that has a virgin

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system an edible can last a very long time. If they get a large dose if they have THC they may be high for 48 hours.

Jill: My question is if your medically compromised what is the better route to go? I mean, I'm so green to this I don't understand it, but I mean, what is the better route to go? Smoke it, or to eat it?

Dave: The only advantage I can see in smoking is fast action because a lot of it gets metabolized.

Jill: So if you're terminally like almost going to die you should smoke it as opposed to maybe you're expect a year you should maybe eat it, or a kid? I mean, I can't imagine having a kid smoking something.

Dave: No.

Blaine: Can I go through my consumption slides here for these people, Dave?

Dave: Sure, Blaine.

Jill: Sorry, I'm going to be quiet now. I just don't understand it that's why I'm on this call because I want to understand.

Blaine: Let me tell you this to start with. Your understanding is completely fine. I was told to go ahead, and use cannabis in 2008, or as I call it marijuana, but my doctors pushed me to that word cannabis which I enjoy now. The only thing I knew to do was go down to the head shop, and buy a pipe, and a bong because I had no idea how to consume cannabis in any other way. The only time I ever consumed it in brownies when I was in my 20's when someone else made it which is what I tell people 100 percent if someone hands you something that they've made personally, or doesn't have any kind of package on it don't eat it because you have no idea the potency, or what they put it in. Most people making edibles are stoners, so they really don't have any concern. I make edibles with gloves on, and a clean kitchen. That's all I make for that day is just edibles. I package them,

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put them in sealed packages, so I'm making them for sick people so I know that they're not going to harm them any.

I'm going to go through consumption. We all know about smoking, pipes, joints, blunts, bong, bubblers, and more. When you asked the question about terminally ill, yeah, if you have less than two years left to live smoking marijuana is never going to be a problem if that's the way you want it. If you want that seven to 15 second instant hit smoking is the only way to get that instant hit. When we get into concentrates this is where we get into the oils, and the edibles and everything else that's out there. Really the only two concentrates that I would say their extraction methods are healthy is kief and hash which those are actual just natural extractions of the trichomes on a plant. You're not going to find this in the dispensaries, or any medical dispensary. I've looked it's not available. Most of the extraction methods they're using today is butane, propane, CO2, and other things that when it evaporates off, or when they say it evaporates off I've used it, and I get a headache more than I already have.

Then you move into your whacks, shatters, dabs, 710's which I already said those are all just high concentration anywhere from 60 to 100 percent THC. I've tried these because I wanted to see how they worked on my pain. If you want to get high you basically heat up a porcelain bowl up to about 700 degrees, and then you take a little tool that's used it called a dab tool you put it to that porcelain bowl that's hotter than you know what, and then you suck through a water pipe, so you get that pure THC. I was so high that I was contemplating that this is something that's not good for other people to use.

The guy that I used it with his name is Art. He is a jazz pianist. He only did it for about two weeks because he said that he enjoyed to smoke his joint while he's playing his piano, and no longer did flower work for him anymore because he had pretty much fried his brain cells so that he needed something of 80 percent THC. That's when I moved down to what I'm talking about flower. Flower is the bud of the plant. Most people have the misconception that the leaf is what you smoke. The leaf is really not

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what you smoke. It's the bud, it's the flower of the plant. What I do today and what I've been doing...

Jill: I'm sorry, I'm slow.

Blaine: I like your term you said you sort of green.

Jill: I am because I'm trying to grasp the whole conception of this I really am, and I am green.

Blaine: And what conception?

Allison: Are we good so far, Jill?

Jill: Just about, yeah, good.

Allison: I think you're doing a really good job of explaining it, Blaine. I'm appreciating it.

Jill: Yeah, definitely, thank you.

Blaine: When you vaporize flower this is the opposite of smoking. This is where I get into when I talk to people. You only raise the temperature to about 365 degrees, and 365 degrees is all it takes to peel off the trichomes, your CBD, and THC off the plant. Basically, if you look at the cannabis after you've used the vaporizer, and smell it, it smells like roasted peanuts because you haven't burned it, you haven't carbonized it, you haven't taken anything in the carcinogens, and so forth, so vaporizing is what I recommend to people that are going to use cannabis for a long period of time. It also hits the system just as fast as smoking.

The problem I find with people is there's a whole routine about using cannabis, and smoking it is part of their persona, so even people that used cannabis beforehand that then get ill they want to smoke it. I can't tell them to do any other way, and they think that's the only way to do it. I kind of laugh at them because I use a quote that I read from a medical article that smoking THC is a bit like taking an avocado, battering it, deep frying it, and then touting its fresh vegetables, so smoking it is not a medicine to me.

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Then you get into here's another consumption I want to talk about which is something that you folks will probably hear about if you haven't already it's called Rick Simpson oil, otherwise, known as RSO oil. He's a gentleman who supposedly cured his cancer in I believe it is Toronto, Canada by using an extract of cannabis on some bandages on his face, and he had skin cancer. There's no scientific evidence of what he used as an extract. He put it on his face for four days, took them off, and the skin cancer was gone, so anytime that someone with Google today anytime that someone has cancer goes to their doctor, and hears that word that I heard myself it scares the hell out of you, you go and Google cancer. All this talk and hoopla about marijuana you Google cannabis and marijuana and you come to Rick Simpson, and Rick Simpson's story.

I've had to debunk that story with so many people to get them to see that this is just an Internet story with no evidence. The extraction methods that he uses because he actually has on his website how to make the same paste that he used his extraction method is use any of these butane, propane, and so forth. I'm not sure if I want to use Rick Simpson oil on my face. I had a cancer patient I went and saw who was using Rick Simpson oil who swore by it, but she said she got a little bit of an upset stomach when she took it.

First of all I looked at her and I said "You're eating this? Do you even know what this is?" She goes "Well, the dispensary told me that I should eat this." I said "No, this is Rick Simpson oil." It comes in a black syringe. It really looks kind of hideous, and I said "This is to be smoked." She goes "Are you sure about that? They told me to eat it." I said "Here you got something, and a lighter," and I put it on a little plate that she had on her counter, and I lit it on fire, and it just sat there and smoldered on fire like it was gasoline. She looked at me and goes "Why would they tell me to eat that?" You're talking to people that are under the age of 30 that have smoked marijuana only recreationally that are telling you this is what you should use.

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Dave: You know, sadly people are reading the Internet, and grasping at possible solutions for their problems. It might be useful at this point to review what the science really says, or at least what we know.

Allison: Can I stop once more. We have one more question, Dave. Can we ask it?

Dave: Sure.

Allison: Jill, are you good for now?

Jill: I'm good. I'm sorry. I didn't mean to consume so much time. I'm just green like I said to this.

Allison: There's probably an opportunity for us to get you more information. If you want to let me know, and I'll check and see if Blaine, or we have a way to.

Blaine: I'll say this to everybody on the phone that's here write down this name. Ethan Russo. He's a board-certified neurologist has been studying CBD. He'll tell you mainly anything and everything there is about CBD.

Jill: Got it.

Allison: All right, Jill, so I'm going to put your hand down, and mute you, and I'm going to see who this other person is.

Jill: Thank you.

Allison: All right, I've unmuted you from Grand Prairie.

Marla: Hello.

Allison: Hello. Who raised your hand? Whoever raised your hand I've got you unmuted now. Well, maybe they didn't mean to.

Dave: Allison, maybe what I could do is cover what the science really says seems to show up as having...Oh, we have somebody there yet?

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Marla: Yes, I'm sorry. I had my phone muted.

Allison: That's okay.

Marla: I do have a two-part question about you were talking about the CBD oil that's industrial hemp based versus the cannabis based products. I'm asking as far as in use with like cancer patients you're referring to treatment for nausea, or things like that. My first part of the question is do you know if the hemp based product is at all effective in those situations with chemo patients, or is it pretty much the cannabis oil that gives the main benefits for those patients?

Blaine: All right, this is the issue we have with CBD. CBD can only be sold in 48 states if it's a hemp based CBD, so the company I work with, and I don't work with. Excuse me, I'm going to rephrase that. The company that I use their tincture and promote because it works their plants are cannabis plants that have gotten a CBD hemp status so they can sell throughout the 48 states. The problem is with most of the CBD that you can buy on Internet you have no idea if it's coming from the industrial hemp, or the cannabis hemp.

I don't have a real good ratio here, but to give you an idea the one ounce bottle of tincture that I promote there's about probably 10 to 12 bottles in each plant. To get the same CBD concentration out of industrial hemp it would probably take 15 plants, so when you go on the Internet put in CBD tincture, or oil, there's rubs, and so forth, 99 percent of those are snake oil that's going to do something. Some of it is the placebo effect I will say that, and some of it is it does something, but if you're talking about cancer patients, or any other disease that's looking for a true CBD tincture they have to get one that comes from the cannabis plant.

Dave: I was going to say that I think one of the big distinctions is that 113 different cannabinoids that we know of the industrial hemp plant has had the THC and CBD fractions bred down so that they're pretty small, so it has other cannabinoids. It may have some affect, but you're not going to

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get that same benefit if you're trying for CBD from the hemp because it's just not a high percentage.

Marla: Okay, is there a way that there's a link or something that information as far as getting in touch with Blaine for a consultation, or something like that in the future is there a way I can get that information?

Dave: I'm sure we could work through Allison to do that.

Marla: Okay, I think I sent her an email with the question.

Allison: Okay, you can email me. Perfect, tell me your name again, do you mind, or do you want it more private?

Marla: It's Marla Lovane.

Allison: Oh, Marla, okay, great, thanks. Okay, yeah, Marla I'll get you his information.

Marla: Okay, perfect. All right, and then you mentioned that neurologist, Ethan Russo, as far as any questions. As far as questions I was wondering about interactions with taking the cannabis oil while taking chemo because I read a little bit of that, and was wondering about that. Okay, I'll get in touch with you later then, I guess, Blaine.

Blaine: I'll touch on the chemotherapy. Due to the fact that I had a brain tumor removed in the oncology department at the Good Samaritan Hospital here in Portland, and I are close. In June I'll be doing a talk to some of their people in the oncology department, but currently if you have cancer at Good Sam, and you ask about cannabis I tend to get a phone call from somebody that wants me to talk with them. The tincture that I promote probably about 80 percent of the people use it that are going through chemotherapy, and tend to use it after chemotherapy to give you an idea what use they get out of it.

Marla: I see. Okay.

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Dave: Before our call evaporates I thought it might be worthwhile to mention where we have strong information on the science because the science has been rather hard to get. A lot of science has been done outside of the United States, especially, in Israel, and other countries, so the main therapeutic effects where we've got a strong association is with chronic pain, and MS muscle spasms, and also it's obviously good as an antiemetic. There are some associations with injury and deaths in motor vehicle accidents. That's usually when it's blended with another drug, and there's potentiation. The two drugs work together. There are some fairly good associations, well, bad associations with pediatric overdose injuries where a kid gets into an edible, and maybe injures themselves. There is an association with chronic bronchitis, COPD, and asthma somewhat less. On immunity it's pretty obvious that, especially, the CBD fraction acts as an anti-inflammatory there's a lack of data on other things regarding immunity. I know that there are certainly case reports, and some information on people using it for organ transplant. It does seem to work for that, but we don't have great studies on it.

With mental health there is an association of use of cannabis bringing on schizophrenia and psychosis, although it seems to be with people that are already predisposed. Interestingly, though, people that are users tend to not have as severe mental health issues as people that did not have it brought on by that. With addiction, addiction is associated with very youthful starting points, but there's a limited correlation to other drug use, so a lot of people have talked about how it's a gateway drug. There's not great science to say that's actually true.

On psychosocial issues fairly limited evidence, although, it seems apparent that it can damage people's social relationships. There is a pretty strong association with some decreased cognitive performance, education, memory, and attention, especially, related to youthful users. As far as pregnant women use it using cannabis it is associated with low birth weight, and that would be very concerning, so that's where our science sits right about now.

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What we see for pain relief is, although, we can say that these drugs are a little bit different the two primary fractions CBD, and THC when we look at it in double-blind studies that's hard to do when one has that euphorogenic potential. It seems that they're fairly equivalent in their ability to relieve pain. Blaine, you can tell me I'm wrong, but the THC fraction has this attitude adjustment to it, so that may be why we perhaps see a difference there when we look at pain relief. Go ahead, Blaine.

Blaine: Also, THC hits the limbic region in the brain which is the emotional side, so if you use it constantly it will dampen your emotions. I know a lot of people that say that their significant other is in love with X drug, and that may be cannabis because it lowers that emotion enough that this is more desirable than bouncing a basketball, or playing a video game, or driving, or whatever else was a... A hit of dopamine if after using it enough times you pretty much drop that dopamine, your ambitions are lowered, and you don't make as much money. The numbers are out there that over a lifetime you make less than somebody who's not a chronic user which I guess that wouldn't be very hard for us to actually assume that's the case.

Dave: The other thing I wanted to mention is that the main reason why these group of drugs are less toxic than other drugs is because they don't affect the medulla oblongata. It doesn't have the CB1 and CB2 receptors in it, so that's where your respiratory drive is. Because it doesn't hit that it doesn't suppress your respiration like an opiate, or a lot of other drugs would, so that's really why it doesn't kill people. In fact, it's hard to put an LD50 on any of these cannabinoids, but where they can kill people directly the THC can because it's an anticholinergic, and it can cause tachycardia, so people that have arrhythmias it can be dangerous from there.

Allison: Okay, cool. Wow, that was a lot of information.

Dave: Fire hose, you know, with Blaine and I...

Allison: I had the idea that this was a call that could be like probably spread into three, or four calls, you know.

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Dave: Well, you know, I put together for the AGD in Seattle an eight-hour course. Blaine and I spoke for four hours, plus a little bit through the afternoon. I had two neurophysiologists, a fine arts guy that talked about the history, and an anatomist. There's just so much information, but a lot of it is we want people to get truthful information, or at least know what we know at this point, and realize that, yeah, there are some great uses, and there are some dangers.

Blaine: The biggest thing I represent to people is I try to cut through the chase of the prohibitionist, and the activist because they're both on such different spectrums that the medical part is in the middle because the activist thinks it does everything it's a miracle drug, and a prohibitionist thinks, well, Ronald Reagan's quote is one cigarette joint of marijuana is the equivalence of being on Bikini Island when the H-bomb went off, so there's your prohibitionist. It's just a high extreme on one end, and the activist on the other end when I get them in the same room they get mad at me because I tell them what cannabis can and can't do, and they tell me I'm wrong. I've had a couple of them leave the room.

Dave: Well, and you know, there's a variation in the affect, too, because of CB1, CB2, and the CB1A's are variable between people, so different people are affected in different ways. Some people like cannabis. Some people hate it.

Blaine: There's a certain gene in people that gives them a high paranoia by just one smoke of marijuana. Before I did the research I thought they were just faking it, bogus, or just were paranoid enough they didn't want to do it, but there is an actual gene that if someone takes one puff, and I know of a couple of people like that they get so darn paranoid they'll never touch the drug again. There's nothing exciting to it, but being paranoid, and I wouldn't take it if I had that same thing also.

Dave: There are some people that if they use marijuana they will become psychotic. Usually it's not violently, but I mean, they become psychotic, and think somebody forgot to tell them that they died, or they

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become disassociated with their bodies. It's very strange, so it can go in many different ways.

Blaine: There's an Ohio police officer who decided to take the stash that he got on his last stop home with him. You could probably Google this. I'm sure there's still a YouTube video on it that him and his wife decide to make brownies from it. The 911 call is absolutely hilarious if you know that it's not doing any harm to him, but he tells the 911 operator that he's a police officer, and his wife and him consumed marijuana, and they think they're both dead. "Time has literally stopped, and I think we're dead. I'm not really sure we're making this phone call."

Allison: Wow.

Dave: That's psychotic.

Blaine: That really goes back to my same theory as edibles are highly dangerous to people that are newbies to cannabis.

Dave: Yeah, see that's where people in Colorado have gotten in real trouble because they're surrounded by states that prohibit use so people go there, and they overdo it, and just like one of these cannabis chocolate bars can have as much as 250 milligrams of THC, whereas, say a cannabis cigarette from the 1970's might only have 10. I can imagine eating a whole chocolate bar. Well, people see a chocolate bar they eat the whole thing 250 milligrams. It hits them about 20 or 30 minutes later, and they're high for 48 hours, and they can't come off. They go to the emergency room, and the folks at the emergency room kind of shrug, and let them you just got to wait. There's no real way to reverse it.

Blaine: Let me tell a quick story about edibles here. Edibles that I make are extremely strong, and I tell people. I only give them to sick people. I don't give them to recreational people. I tell sick people that please start with one-quarter of a caramel. Now the reality is this is the same thing as recreational edibles is that a lot of these things are made with four or five doses in them. How in the heck are you going to convince somebody who

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buys an edible that they're only going to eat one-quarter of it, especially, if they're already drinking, or smoking marijuana on top of it. That's where the ambitions of the alcohol, and they're smoking already, and, oh, I'll just take this edible, and before you know it they're in the car doing something completely stupid, and either injure themselves, or die, or injure somebody else.

The edibles because of the simple fact that most people that don't want to smoke marijuana they think buying an edible is a better way of doing it. This is what the recreational problem is, is because I don't want to smoke it. I just want to eat something, and get a little high. With your biochemistry I've had some people it takes up to three hours to actually get the affect, so if you eat one brownie, or two brownies.

Dave: Then they're high for three days.

Blaine: Yeah, I gave four brownies to a sick person, and he said he ate all four brownies because they taste so good. He was out for probably 24 hours. His wife was checking on him, and she was kind of scared. Needless to say that I did not ever give him another edible.

Dave: Fortunately, it doesn't suppress your breathing, but I think there's a real danger with these edibles, too, and that they look like cookies, they look like chocolates, or they even look like a soda, and a kid can get it, and that's dangerous. That's very dangerous for a kid to get hold of that stuff, especially, if they have any kind of heart issues, but even if they don't if a kid gets goofy they might jump on a skateboard, and get hit by a car, and those things have certainly happened, so it's very concerning.

Blaine: The situations that I've heard when kids get it is usually just parents are scared because they don't understand why their kid is lethargic, their eyes are glossy. They're a seven, or eight-year-old child whose never touched any drugs in their lives, and they look like this. I don't have children, but it scares the heck out of me to think one of my nieces, or nephews were to come home and look like that, and not have a clue about why it is.

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Dave: There are records of injuries from that, although, most of the time what happens if a kid gets into one of these edibles is the parents end up taking him to the emergency room, and they just keep the kid safe, and wait it out, so fortunately, usually if they prevent them from hurting themselves there's not much of a downside, and it will wear off.

Blaine: Before we lose people on this call, or this call ends let me give you the tincture website to go to if you want to try something that actually I have probably about 35 people that I've seen some great results from this.

Dave: This is a CBD?

Blaine: Yes. This is their website it's CBDFarmer.org.

Allison: Farmer like a farmer as vegetable.

Blaine: Yeah, f-a-r-m-e-r, farmer.

Allison: Okay, nothing capitalized, or punctuated just CBDFarmer.org.

Blaine: Yes, and we have used that due to the fact that I know the owners use promo code BC, as in Blaine Chatterton, '17 is the year, so promo code BC17, and you'll get a 10 percent discount.

Allison: First of all, it is legal in most states to order?

Blaine: Idaho, and one other state it's not legal in, and that doesn't stop them from mailing it to Idaho.

Allison: Okay.

Dave: Yeah, let's keep in mind. CBD will not make people high. THC will make people high, CBD won't.

Allison: Right, and tell me some of the uses for it, Blaine, if you don't mind.

Blaine: Some of the uses for it Lupus, Lyme disease, MS, cancer, seizures.

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Dave: So really the best science says that it's great for seizures. In fact, one of the primary uses is kids that have Dravet Syndrome where they have maybe 30 seizures a day, and it actually kind of burns their brains out, and they die. They can go from 20 or 30 seizures to one or none. It's like a miracle for some of these kids, but it also seems to work well for other kinds of seizure disorders, but it really takes some experimentation for each person. They have to try it to see what does it take, and will it work for them, and can they taper down on some of their seizure medication. I mean, even if they could cut their seizure medication proportionately, or say they could cut it in half that's a big advantage because you're not having to deal with some of those side effects of the seizure medication, so CBD is great for that. It's also good for pain. There's good science on that, pain and seizures.

Allison: How do we figure out our dosage?

Dave: That's very difficult because the lack of research we just haven't had the research, and the lack of the ability to get a predictable product we actually know what's in it. Now Blaine has worked really hard to try to find something that is pretty predictable, but that's why physicians really cannot write prescriptions because they don't know what they're writing a prescription for. Go ahead, Blaine.

Blaine: Let me say something about the physicians. I talk to a lot of doctors. Their biggest thing is because there is no double-blind, there is no FDA, there isn't any of the research they don't legally want to talk to any patient about marijuana, and that's where I found to be an asset because if I can get my number in front of them they'll at least say this person will at least help you, but I can't recommend them.

When we're talking about dosage let me talk about dosage one second. I've seen people use this particular CBD that I've seen some incredible results from. One gentleman uses eight bottles a month which to me is flabbergast, but he also has six seizures a day, and then down to your arthritis it surprised me, and almost shocked me how my cousin is 70

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years old, and other people that are friends, and other people that I never met just put the CBD oil on their hands and rub it in, and within about three minutes to two minutes they look at me and go "How soon is it supposed to work?" It's gotten some of the best results on arthritis that I've ever seen.

Allison: Wow, topically.

Blaine: Yes, topically.

Allison: Wow, that's amazing.

Dave: Well, all these cannabinoids are lipids, and they'll absorb through your skin.

Allison: Okay, well, I guess if I decide to try it for my back pain, or whatever, then I'm going to have to call you to figure out how to figure out my dosing because I know we're running out of time. Well, we've already run out of time.

Dave: Make sure you check in your state what the regulations are. You don't want to get in trouble.

Allison: Okay, how do I find that out?

Blaine: Texas is fine. Like I said if you live in Idaho that would be about one of the only states that I'd be really nervous because even Georgia. Idaho and Alabama, let me just say that. Idaho and Alabama would be the only two states that I would be really worried about.

Allison: Okay, all right. Well, my goodness, this has been very interesting, and I really do appreciate you both being on here, and everybody who stayed with us all this time. Thank you. Do you gentlemen have anything final to say before I open up the lines, and end the recording.

Blaine: Cannabis is a medicine, but it's got a long ways before it can be a medicine that can be used by the masses.

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Dave: I'd also say that we need to be a little careful, and make sure that if people have any kinds of issues, especially, arrhythmias they are taking their chances.

Allison: Well, thank you both very much for being on.

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