[00:00:00] Intro

Darin: You are listening to the Darin Olien Show. I'm Darin. I spent the last 20 years devoted to improving health, protecting the environment, and finding ways to live a more sustainable life. In this podcast, I have honest conversations with people that inspire me. I hope that through their knowledge and unique perspectives they'll inspire you too. We talk about all kinds of topics, from camping up your diets to improving your well-being to the mind-blowing stories behind the human experience and the people that are striving to save us and our incredible planet. We even investigate some of the life fatal conveniences, those things that we are told might be good for us but totally aren't. So here's to making better choices in the small tweaks in your life that amount to big changes for you and the people around you and the planet. Let's do this. This is my show, the Darin Olien Show.

[00:01:11] Guest Intro

Darin: Hello, everybody. Welcome to the show, The Darin Olien Show. I'm Darin, and I will be your pilot navigating you through another installment. And this guest is an incredible giant of a guy, incredible heart, incredible human, Dr. David Gazzaniga, who is the current head team physician for the Los Angeles Chargers, and he has a wealth of information. He is well seasoned in performance and getting people back in their game again. After growing up in Orange County, Dr. Gazzaniga played football at Dartmouth College. He went on to then complete his medical training at Dartmouth and then had his residency at Harvard University. And then he went on and a couple of other fellowships, one in at the Trauma Fellowship and a Sports Medicine Fellowship at the Stedman Hawkins Clinic in Vail, Colorado. He then was one of the team doctors for New York Jets football team and was the head orthopedic surgeon for the New York Islanders hockey team and also Hofstra University. He then was an orthopedic surgeon at the US Open in New York. So this guy has been all over working with some of the top athletes, trying to get them playing again. And we had some great conversations both before the podcast and certainly within the podcast. And we talked about alternatives. And he really made a point of this stuff shouldn't be alternative, it should be all doctors working towards the common good and not just stick these guys full of medications. So this can apply to you in every way, but it's shifting that paradigm in that American Medical Association thing of drugs and germ theory and vaccinations, as opposed to health, medicinal plants, botanicals, taking care of yourself, using common sense of health, eating and sleeping and eating great food and taking botanicals. We've been using botanicals for nearly 60,000 years. And so let's shift that alternative idea into this is my primary. So I don't know about you guys, but it's very rare that I end up at a hospital unless I've cut something open or broken something, which definitely happens in the middle of nowhere when I'm playing around with my dog and I'm cutting trees down. But other than that, I'm not getting any vaccinations of any kind for the last 35 years, and you're definitely not going to get me started now. I'm going to take care of myself. I'm going to eat the best food ever, and I'm going to let medicine be thy food, and the herbs be thy medicine. That's my approach. And so we got a little bit into that with the doctor. And you'll find this incredibly fascinating from a guy that's lived at the top of the food chain within his field and

helping people perform better at every level. So enjoy this great conversation with Dr. David Gazzaniga.

[00:04:21] First Part of the Interview

Darin: Before we jump into some of your projects, just kind of step back and give people, because you kind of have this really cool background and working with the teams and the athletes and yeah, just give a little background as to why you went to orthopedic surgery, what works in that kind of world and why you got into athletics and kind of now how you're getting into the alternative call it side of things or maybe a broader view of injury prevention, et cetera?

Dr. David: Yeah, thanks for having me. And it's funny, as you were saying, alternative, it seems almost like the wrong term. It should be mainstream.

Darin: Bingo. Absolutely.

Dr. David: And I think the more we learn about things that we're told, the more we understand. And we were talking a little bit about how hard it is to find the truth in media and just pretty much where normal sites for getting information is more and more difficult. So for me, I grew up in Orange County and Santa Ana, and I went to high school there. But oddly, I got really tired of the California thing when I was growing up and I wanted to get out of there, so I went to school in New Hampshire and then I went to med school. My dad was a cardiothoracic surgeon, pretty well-known chief of staff at St. Joseph's Hospital, and he was definitely my mentor, but he was a cardiothoracic surgeon. So I get to medical school and I find out that some of those people, they don't do so well when you operate on them. So I was thinking, I'd like to do surgery, but I don't want to go that way. So I was drawn towards orthopedics because it sort of fit my personality in terms of wanting to be sort of a carpenter, to build things, put things back together. And so so I ended up getting into orthopedics and then you gravitate towards the people that you connect with. I played football in college all four years, so I really enjoyed the sports aspect of it. And it's a real challenge to take someone who's injured or was at one level and then they drop back down and try to get them back up to that level again. And it's not always possible, but if you have the skill and the patience and the patients are very motivated that you can get to that spot. That sort of led itself to me spending time with athletes. So I got my first job was in New York. I was the head team physician for the New York Islanders. And then I worked with the same group. We worked for the Jets. And then I moved back to California to help take care of my parents. It was the main reason for coming back. And I was just going through, looking at different high schools, maybe taking care of, and then I was blessed to have the Chargers give me a call to ask me to be their doctor. But when you're hanging around with professional athletes, they'll be things where the general public will roll their eyes or even my colleagues and in medicine or in orthopedics will roll their eyes like that stuff doesn't work or that doesn't make any difference. And you talk to a professional athlete and they say, well, if it makes half a percent of a difference and I'm fighting against somebody who's got that difference on board then that's the way I'm going. So it really ups your game that there's nothing off the table in terms of discussion and to get people to their maximum potential for their health and their

athletic ability. So that's really where I am now. And we started in our group in our hospital at Hoag Hospital. We did a study on what it looked like for people getting opioids or pain medicine after surgery. And so I'll get into that and then sort of where we want to go in the future as far as pain management are really helping people to be healthy and understanding what the facts are about.

Darin: I guess. What was the shift for you to start? I mean, orthopedics, like you said, little carpentry work. So there's a little bit of pounding, a little bit of screwing, a little bit of,so it's a little straightforward in that way. But at the same time, what they used to zipper open the knee, you can do it orthoscopically so of course there's advancing and all of that. So I guess for you, how did it occur to you that even though my colleagues were a certain way, how was it occuring for you that you needed to open and expand to other things? What was that point like for you?

Dr. David: It's always been with me and through my parents to be both critical and open-minded at the same time. You can't dismiss something out of hand that you don't have all the information about. And like you're saying, you know, if you want to study something, you have to break it down to the smallest part. When you break it down too far and there are environment, there are all sorts of influences that come about that now you've taken what actually is happening and you've made it into something that's not real or not part of what nature is. So I'm not going to say that everything that's out there that's alternative is the correct way to go, but when I have colleagues that say, well, why would you want to take glucosamine and chondroitin sulfate if it doesn't work for anybody and or why does nutrition matter at all? And then I'll say, well, if you eat french fries every day for a couple of months, then come back and talk to me about how you feel. I mean, yeah, you could eat a french fry if it doesn't bother you, but if you don't exercise and that's all you eat with nothing else to balance, you're you're going to have problems for sure. So that's sort of where my mind went. And then when I was in college, I was a biology major and I took this seminar. It was about Linus Pauling and his idea of vitamins. And if you don't know who-- I know you do, but if your audience isn't aware, Linus Pauling was a Nobel laureate that really believed in vitamins and very high doses of vitamins, and he had very sound ideas about it. Maybe some of it worked, maybe some of it didn't work but to just say, all vitamins make no difference at any dose, then that's just lunacy. You're not contemplating the whole picture, the whole person in that regard.

Darin: Yeah, so I mean, everything from our current environment to not talking about nutrition, vitamin D levels, and vitamin C and basic nutrition, that's just insane. Of course, all those things have a factor. So then I'm just curious, before we dive into this other stuff. I'm curious, so now you're with the Chargers. Just so people can have understanding, what's the day in the life of that job? What does that typically look like? Is it a pain management job? Is it a function and function first, pain first? What does that actually look like on a day to day?

Dr. David: It's really hard to describe these athletes because I played football in college, as I mentioned.

Darin: Defensive end or offensive or tight end?

Dr. David: I was a tight end going into--

Darin: That's my first thought.

Dr. David: But I ended up playing offensive line by the time I left. It was easier to get my premed stuff done if I was playing offensive line for some reason. I don't know why. Anyway, I played center for two years, my junior and senior year. So it was a fun position and I really enjoyed it. You're right there in the middle. So I know that on any given place, someone steps on your foot, they twist your hand, you know, you fall down and your knee hits the ground. You twist your ankle as someone runs by you. These things are happening every single play. And you finish the game, you win or lose, you got soreness. And of course, if you win it, it's not quite as sore. But these guys, when you watch them play the sport, they run into each other with such force that it is impossible for me to imagine that they would stand up afterwards and go back and do another play. My whole body aches just watching it. And there aren't a lot of late thirties football players because it's not possible. And I look at some of these guys and I know they have pain every day, but one thing about these guys is that they literally do not feel pain the way that we do. There's one player a couple of years ago who went down and I ran out on the field and he said I broke my ankle. And I said, well, all right, let me just check this out. How do you know you broke your ankle? He's like, I felt it, I felt a break. In the same voice that I'm speaking right now. And I reached down, I grabbed his ankle, and the whole thing crunches because his ankle is broken. And I was like, you know what, you broke your ankle. Yeah, I felt it. So we get into the sideline. He doesn't want to take the card or anything. He wants to get off the sidelines. He goes in, turn off the x-ray. It shows a fracture. And I put him in this booth and I said, all right, now just use these crutches, stay off and it's going to hurt like heck if you walk around on it. Second half is going on. I look down the line and here he is standing there with no crutches just walking around, talking to his buddies like nothing ever happened, walking on a broken ankle. So at that point, I was like, these people just aren't normal people, and that's just what we're dealing with here. And so, you know, you look at some of these guys in the supermarket, I could go on and on, but you look at some of these guys in the supermarket, like that guy's a football player. He doesn't seem that impressive when he's checking out, getting his food, but there is such a huge difference between what you see on the outside and what they're capable of on the inside. They're special people for sure.

Darin: I have a funny moment. I've said this to my friend. So I played college football and creating back injury. So in the back of my mind, it stopped early and I still want to keep playing. So cut to at a friend I was training with in Boulder who was still in the NFL seven years offensive lineman. We rode Harleys together, hung out, and trained in the last few seasons of his career and he was three plus. And so one day we got out, we were riding motorcycles. We got to our Mexican restaurant. We had a couple of shots of tequila, as we kind of did. And I was feeling a little sassy and I was like 220 pounds and he was still 300. And so I said, I'm going to get around you. And he goes, "Huh?" And so we got in our stance and I took off with every ounce of what I thought I had, and he took one step, you know, and did that punch, and it threw me like I've never been thrown in my life, like I was airborne. And in that moment, I understood, number one, that's why I'm not there. Number two, the jump from college to pros and you look at

[00:16:41] and even though he had me by 80 pounds, he wasn't that far away from me in terms of in the gym. I was pretty strong, but when it translate it, it's just different. Because you could strip these guys down in normal clothes, they are big people, but then the ability to produce power, it's just something different.

[00:17:08] Advert

Darin: Hey, what do you use on your skin? I use this incredible product, The Good from Caldera Lab. It's lightweight serum. It's made of 27 active plant botanicals that are organic and wild harvested. Yes, this is my ideal serum for my face. Just a small amount every night after washing my face, and it's all it takes to have this great skin. It smells good, it feels good, and helps tackle dry skin without being oily, wrinkles, scarring. It really does keep my skin looking young as I absolutely feel from the inside. Got to try this stuff. Go to calderalab.com/darin or use the discount code, DARIN at the checkout for 20% off your first order of The Good. If you don't like it, guess what? They will give you a full frickin refund. So invest in it, invest in your skin and your health and it's easy. Guys, go get some.

[00:18:30] Second Part of the Interview

Darin: So let's talk about then because that's the perfect segue way of this kid breaking his ankle, I always think of the Romney [00:18:39] story. He snapped his finger. He actually cut it off during the-- that was the urban legend that he had to cut it off at the game. But they all talk about he just was a whole nother level of pain. But then you have the spectrum of people in pain and just a variety of different ways and they're always hurt. Every NFL player, every football is going to be hurt the entire season. So with that level of collision, with that level of performance, with that level of pressure, I can imagine. Get my ass back in the field. I'm over. I'm done. And so as the doctor, you can't just shuffle all these gnarly drugs at the guys. You have to figure out how to heal and then how to help these people deal with the trauma and the pain. So talk to me about that.

Dr. David: The athletes come in and obviously, Monday morning we go over injuries and we take care of what. We can we get pictures of what needs to be looked at with MRI or x-rays. And then they have Tuesday off around the league. It's an off day for the players and pretty much across the board they will say that Monday is bad, but Tuesday is terrible. And it's funny that that's their day off because I'm sure that's the day where they don't want to move and do anything, and they show up on Wednesday and they go to practice. So I don't know what happens to these guys, well, I do know what happens. They say, all right, this is what I got to go through and I got to get ready for the next game. And so Wednesday, I'm going to be sore still. And they come in and they get their treatments at 6 o'clock in the morning. You think of these guys as, you know, they're going to show up on Sunday. They go to practice maybe a couple of days a week. But if they get injured at 6:00 AM every single day, they're getting treatment. They get treatment, they go to meetings. They go to meetings, they go to practice. They go to practice, they go to meetings. And so they're there all day. I mean, it's a full time job for them. And obviously, they're working on Sundays all day too. So I don't begrudge any of these guys

the money that they make because they're paying a dear, dear price for a long time, and they got families to take care of. And so there's a lot of things that can motivate someone into doing that, but I don't know. If you're around a guy who really loves the game, like loves football, those people, they lift the whole team. They're just going to show up day after day and just get the job done. It's pretty amazing.

Darin: So how do you help these guys in the healthiest way possible to deal with that level of performance, recovery, injury, injury prevention, pain management?

Dr. David: So pain management has been in the league in the past. So using true painkillers like opioids in the NFL is not as prevalent now. I rarely will write a prescription for opioids, and it's usually for a broken ankle or something that's a herniated disc or something that's pretty severe. But for the most part, these guys go natural. They're very in tune with their diet. They will take supplements that they have been prescribed or that they've been asked to take. We check their vitamin levels, vitamin D. We stay on top of that. They get treatments from an amazing training staff. They do just about everything for them. There's a couple of chiropractors in the training room. They do cupping. They do all sorts of things, and there's the range of motion, acupuncture. And so the athletic trainers are unbelievable. The amount of knowledge that they have and the ability for them to take someone who's got an injury swollen and can't walk and in two days, they're playing on the field and it's pretty spectacular. But all I do sometimes, I feel like the fifth wheel because I just point out the problem and tell them what it is and then they take care of it. So it's a pretty special environment. It's fun to be around. But in terms of injury prevention, there's a whole off season. There's lifting and running and maintenance that occurs during the season, you know, flexibility, different types of exercise modalities, lower demand, yoga type of stuff up to really high level plyometric type of stuff. The NFL has also spent some time trying to figure out how to prevent soft tissue injuries. So they really looked at how much time it takes for an athlete coming into pre-season to ramp up to be more fit or really to have less injury potential. And they broken it down to this many days, this many hours of practice. And, you know, will decrease the risk of having like a hamstring strain or groin strain. And so there's a lot of thought and brain power going into that.

Darin: Is that like NFL wide? They've given that information and do people have to follow it or is it just kind of a guide like, hey, we've seen that, if you go over this amount of hours and workload and threshold that there's a propensity to have more injury? And do they just distribute that and then coaches make their own decisions and how does that work?

Dr. David: It's a little bit of both. It's kind of like a federal government in the States. So these are the things that we found and so they can make a mandate, like these are the only helmets that you can choose, but there's 30 helmets that you can choose. These are shoes that we've tested with the most sophisticated ways possible. And so these are the ones that are good for this position and some other position. These ones are riskier. These ones are safer. But then it comes down to the players and the players have their players association with their collective bargaining. They can mandate that. So practice hours are set by an agreement between the NFL and the collective bargaining. And the ramp up period is built into the system like how

many days there are before the first game. But how the team actually manages those days is more so up to them. So there are certain things. They put in the guardrails on either side, but then it's up to the team to try to figure out how to maneuver that.

Darin: From your experience of seeing that high performance and then like you were saying, kind of almost this conductor role of here's what's going on, you great group of people, your staff, let them do the work and then you're watching things that work and don't work or whatever. What would you say to the general population who have aches and pains and what have you learned? And like I guess, what wisdom from the perch that you're, number one, you have studied? And number two, you've been in this high performance zone and observing these high performing people. What are a few things you could say from that perspective that people could or should implement in their lives so that they feel more free and capable?

Dr. David: I'd say, I couldn't say that it translates perfectly well but for these athletes, hydration is a big deal. Soft tissue injuries definitely seemed to be more prevalent when people are dehydrated. So hydration is a big deal. Nutrition is huge. Your ability to recover if you're nutrition isn't there and your body isn't equipped, it doesn't have the raw materials to heal. Those are those are big deals. And then above all else for these guys is for me and understanding is motion. If they ever stop moving, then things go downhill. So you look at guys and some guys will have arthritis in their elbow or the shoulder or their knee and you have to maintain range of motion and keep it moving because once you stop moving those joints, they get stiff and then now you've got to climb out of a deep hole there. So trainers are working with them, keep them moving, keep them moving, you know, whatever. If you have to put them on an AlterG and have them run at X percentage of their body weight, that's better than just throwing ice on something and then walking away.

Darin: Yeah, it's different then like go do hit training for hours after that when you're dealing with injury. So it's like backing off but doing correct, safe, effective movement. You know, hearing that, you're like, well, it's like even when we're in Sardinia with the blue zones and you look at them like, okay, they move every day, they walk every day, they go out and pick their own food from their garden. It's fresh, it's there. And they're drinking fresh water and it's all kind of basic. And it's probably even more acute and necessary when you're dealing with that high-level turnover. So now for you, what are you doing moving forward? What's your goal for the team and for the athletes? And what's your plan to continue? I would imagine you're living in that high performance zone, so you also are a challenge. So how are you looking at innovating and helping and supporting this ecosystem moving with these athletes? So, you know, I have conversations with them and it's a highly motivated, intelligent group of people that they will seek answers and they will ask me questions at times, but they have sources that they trust and they go to. And I get it. There's been a feeling around the league in years past, it's changing now, though but if you want to find someone you can trust, you got to go outside the organization. And that is a mentality that was probably fostered a bit by some disgruntled players or different examples that would come up in the news or in different situations, and I totally get that. So I don't try to force anything upon them, but sometimes I'll have to ask about a certain sort of treatment, and I will have a discussion about whether it's safe or viable or whether

it would help them or set them back. So in the reality, my partner there, Dr. Yim is the internal medicine doctor, we will create the healthiest environment possible and identify their injuries and give them sort of an idea, okay, if you go back and play, this is your risk. And we share risk, my risk and their risk is together. So I don't want to risk my reputation. I really don't want to have that be a major issue but at the same time, if I don't take any risks, then everybody who gets hurt just sits on the sideline. So it's a very, I won't say it's delicate, but it requires a lot of trust. And so that's really where I try to insert myself into their lives as you know, I am here is a resource of helping you to navigate this injury or this situation. And if I can be the resource to that and ultimately and not infrequently, I'll say, look, you can't go back and play with this injury because it's too risky. Or I'll say, I don't know the answer to how risky it is so maybe we hold back. And other times, they will look at me and say, is it safe to play? And I'll say, it is safe to play. It might hurt, but it's safe to play. So those are things, you know, I'll have-- Unfortunately, some players want to get back more than would be healthy for them, and I've been asked for giving them pain medication to be able to go back, and that is something that I never want to cross over that boundary. I don't mind giving it to them for a day or two to recover, but to give it to them in order for them to go out and play. That's something that has happened in that league in the past. So that's changing.

Darin: That's a dangerous thing. You're shutting off your own circulating ability to respond to injury anymore and protection. Your protection window is just thrown out and the pressure. I can imagine back in the day, I have heard the stories, it's like it's crazy.

Dr. David: The problem there is if the doctor covets his job more than the health of the players, then you will make compromises. Or if you think that the organization and the way they view you is more important than the athlete's health, then you're going to run into a dilemma and have a problem. So I try to tell their athletes, look, I would rather quit my job and walk away from this than have you put at risk, unnecessary risk, I should say, because there's always risk. I firmly and honestly believe that I could go do my old job and be okay with that, but if I gave someone the advice that they were going to be fine and something catastrophic happens. Bad things happen, that's part of the job, but but catastrophic things, I don't know. That's why I didn't go into cardiothoracic surgery in the first place. I didn't want to be standing over someone whose heart stopped while I was working on it. So I went to carpentry.

[00:34:21] Barukas Ad

Darin: Many of you who follow me know I've spent most of my life searching for the healthiest foods on the planet. If you look hard enough, there are a few unknown extraordinary foods around the world that people still don't know about. And a few years ago, I came across my favorite superfood discovery of all time, Barukas nuts. When I first tasted them, my eyes lit up. The taste alone just absolutely blew me away. But after sending them to the lab, which I do and getting all the tests, I realized they're the health theists nuts on the planet. No other nut even compares. They have an unusually high amount of fiber and they're off the charts in super high antioxidants and have few calories than any other nut. It's jam-packed with micronutrients. But they're not just good for you, they're really good for the planet. Most other nuts require millions

of gallons of irrigated water, but Baruka trees require no artificial irrigation. Barukas are truly good for you, good for the planet, and good for the world community. It's a win all the way around. I really think you'll love them, so I'm giving all of my listeners 15% off by going to barukas.com/darin. That's B-A-R-U-K-A-S dot com backslash Darin, D-A-R-I-N. I know you will enjoy.

[00:36:21] Third Part of Interview

Darin: So you've worked with CBD from my perspective as a, number one, a person that gets hit up by that stuff, knowing a lot of people that throw at and then there's been booms, there's been busts, there's processing, there's types of extraction, there's all kinds of things in the industry. What have you seen effective or not effective with this kind of treatments?

Dr. David: That's a good question. I had a lot to say about opioids and how terrible they are. And really, just in a summary, in a brief summary of we were fed this idea in 1980. It was written. A letter to the editor was written by a couple of physicians saying, you know, we have 11,000 people in the hospital. We've given them all opioids and maybe four of them had any kind of addiction problem. So from that standpoint, addiction is not an issue for people taking opioids.

Darin: So that was like the first "major study" that said opioids are fine.

Dr. David: Yeah, and it's been cited over 600 times in peer reviewed literature, but that was a letter to the editor. It wasn't even a study. It was just like, hey, by the way, we only saw four people, but they didn't study it. And it was literally like a one paragraph letter to the editor, and that somehow became the mantra. And that came back in the '90s when opioid prescriptions started to go up. And then the concept around the mid '90s that, you know, when people have pain, it's immoral to undertreat their pain. So they created this concept of the 5th vital sign, which was pain, and they would monitor pain and they track it like a vital sign. And then the American Medical Association got behind that and they said, you know, there should be this fifth vital sign. So then it became this idea and a small tangent. If you go to a doctor and say, well, how do you get patients in your office and what draws them into your office, they will point to Yelp reviews. And how many stars I have on this thing. So if you're a doctor who says, you know what, I'm afraid you're taking too many narcotics, your pain, we have to figure out to manage your pain other than give you some kind of opioid. Well, then you're going to get the one star, and my doctor is a jackass, and he won't give me any kind of pain medicine. And so it's built into the system to over treat with opioids because you don't want to be the one star doctor, you want to be the five star doctor. So then started to change around the mid 2000s where heroin now all of a sudden became less expensive and more available than prescription drugs. And so heroin started to take off again. And then the final phase, so there was the opioid, heroin, and then now fentanyl, which has been mixed with heroin to be able to boost your product and make it more sort of more in volume, essentially. That's where the opioid crisis has really come to now at this point. We did a study at the Hoag Orthopaedic Institute, which was very simple. We just had a pain journal, and in the pain journal, we asked people who were having just a simple meniscectomy who are opioid naïve, where they've never had any kind of opioids before. And

we had them keep this pain journal. And then there were eight surgeons and we just said, alright, just prescribe what you normally prescribe and don't change any practices at all, we're just going to keep track of things. The people would take the pain medicines only for about two days. Then the number of pills that were prescribed on average was about 37 pills. So after 102 surgeries, we said, well, this is getting out of control. We actually had to change the way we prescribed the medication and talk to the doctors, the group of us. And after only 102 surgeries, there were almost 3,200 pills that were just out in the community. So doing the math from that, if you take 759,000 meniscectomy, which are done around the country and you times it by just 3,000. So we had three thousand pills left after 100 surgeries. So by that math, there are 22.7 million opioid pills just sitting in neighborhoods that went unused from a simple operation. That's one operation.

Darin: Just one operation.

Dr. David: And so we said, we've got to change that. So I started going to alternative ways of treating pain, you know, using more nonsteroidal and Tylenol. And then if you need a little something extra, use a really low potency type of narcotic. And I don't get phone calls in the middle of night. I don't get any more than I did before. And studies like this are coming out all over the place. There's a study in the Netherlands where they had people with ankle fractures that required surgery and they only gave them Tylenol. And that was the only medicine they gave after their surgery, and they gave another group pain medicine. There was no difference in the outcomes or satisfactions in terms of-- So there's a guy, Dr. David Ring, who's in Texas who talks a lot about pain, this sort of pain problem and the opioid crisis. And he says that a lot of this has to do with managing expectations. So if you know going into an operation or some situation that pain is part of what you're going to have, then you should be able to have the knowledge to understand that it's a natural part of having surgery and then going forward from there. So if you have that expectation, it's a lot easier to have a conversation than with someone who says, you said I wasn't going to have any pain after this operation. I still feel a little bit of pain right here. I need my narcotics refilled. Just one last thing. If you look at people who take pain medicine after an acute operation, about 6% of the people who take the pain medicine for more than one day have a risk of still taking it after a year.

Darin: After one day.

Dr. David: After one day. After seven days, about 13% of those people will still be on narcotics at one year. So that's my little shout out to any doctors that might be listening. And the doctors that prescribe pain medicine far more than any other are the primary care doctors, partly because there are more primary care doctors than any other group out there. But just the idea of understanding, all right, I'm going to give someone pain medication, I'm going to give them enough to get through three days, and then we've got to figure something else out for acute pain. And that brings us to chronic pain. And we at home now are trying to look at alternative pain methods. We're doing regional blocks. We actually have a study going where we're going to use a device that actually freezes the nerves to the knee, literally puts an icicle around them. So that goes to sleep for about a couple of weeks.

Darin: A couple of weeks?

Dr. David: Yeah. It's pretty amazing. But what I would like to bring into this is the understanding of how CBD can be effective in treating acute pain. Certainly, it's understandable that it could have some effect on chronic pain. CBD, just to go over the basics of it is a cannabinoid. It's a type of molecule that we actually have similar molecules in our body. We have these things called endocannabinoids and we actually make them. And actually people who exercise heavily, it's been shown that those go up. So when you get the runner's high, it is actually your own little hit, sort to speak.

Darin: Little chemistry factory inside yourself.

Dr. David: Yeah. So these substances are in the cannabis plant. So there's marijuana, which has a higher level of THC to CBD, and then there's hemp, which has a higher level of THC. So the ratios are different. And for hemp, for the most part, 0.3% qualifies it or takes it out of the realm of being a controlled substance, so it's safe to take. And so when you get medicine, if you've ever go to buy CBD, you can look at full spectrum CBD, which is going to have THC in it. And then you can look at multi spectrum, which takes the THC out, but it has a lot of the other cannabinoids in there, which there's something like 80 of them in just the [00:45:36]

Darin: I didn't know there was something like that.

Dr. David: Yeah. So there's a lot. And so it's really just those two that we ever talk about because they're the ones we study. And then there's the isolator, the pure CBD, which is really just taking the CBD itself and really taking that out and using that portion of it. And then the CBD actually works in kind of a funny way. You think, all right, well, the CBD goes and attaches to my brain and my immune system, and that's what turns things on. It actually competes for the enzyme that breaks down your own cannabinoids, "anonymised" is what it's called. And so by competing for the same metabolism, the level of your own cannabinoids goes up because it can't break down as fast. So when you take the CBD, there's two places where your own cannabinoids can attach. One is in your immune system and that would be a CB2. So that's in your tonsils, your thymus, your spleen. Those become more active. THC tends to go towards CB1, which is more in the brain, but CBD also has some effect on the brain as well. And the idea there is that it can help with sleep or anxiety and things regarding the nervous system. So the idea of using something that both will modulate your pain, like going for a run without actually going for the run or getting your immune system to be more active and up regulated would be great for people who have chronic pain or things like fibromyalgia, which is a chronic pain situation or even long term arthritis. So that's where we want to enter in, and we've been working with the FDA. The FDA doesn't want to necessarily make it easy to do it. Part of the problem is, as you were saying before, with CBD, we have to prove that it's-- you have to go through phase 1 trials to show that it's investigational new drug, IND, which would allow you then to start to test it on people to make sure it's safe. Once you can do that and you can move into phase 2, and you could start to use it for post-operative patients, which I want to do for ACL surgery. And then that would then get into phase 3, which is more widespread use to see how

people respond to it and study it that way. But that's sort of where I stand with the CBD. I think it's super exciting. And the more we can bring it into mainstream, the more people who will demand it, but the more so that we can take some of the regulations off of it so we can really study to see how it works. There is some idea which needs to be studied. And if we could take some of the regulation down, there's something called the entourage effect, which is CBD needs a little bit of THC to be more effective. Well, how much THC? How much CBD do we deliver it through? Can we deliver it orally? Is it absorbed properly? We know that CBD doesn't really get into your system, I take it back. It gets in your system much better if you eat a fatty meal before you take it because the oil helps to drive it in through the gut. I can't prescribe it. I can offer someone to go find it and take it. I don't sell it. And so that's really where my hands are tied is as I have a belief that this could be a way of pulling us away from this opioid crisis, getting some of these pills off the street and getting people back to where they can have a pain treatment that doesn't involve narcotics. But I can't go forward until we have the FDA saying, all right, we're going to now regulate this. This is what a pill looks like. This is how you package it. This is the dose that we're going to use. And that's really where I want to get this study going moving forward. And we've got people working on it. It's really difficult to get the--

Darin: What's the study protocols look like?

Dr. David: Well, it would be first, we have to get the IND to make sure that we can show that it's a safe drug to take, which a pure CBD exists in a particular seizure drug, which is now on the market. So from that standpoint, there is some evidence that they had to go through that IND process, and so they were able to prove that. But the FDA would only allow for that medicine to be used for one single purpose, which is for a couple of very rare childhood seizure disorder. So for us, the protocol would be if we can get the IND then to start to consent patients to allow them to take CBD at differing dosages postoperatively and see if that influences their need for opioids. So they would still have opioids available to them. We do the same sort of pain journal, and then we see if they said, well, you know, when I take the CBD, I only need this amount of pain medications. And anecdotally, I have patients who do that all the time. They come in and say, I was taking this medicine you gave me and actually felt worse, and so I smoked a couple of bowls and I was okay. I'm like, all right. Well, if that's what's working, what am I supposed to say? But that's sort of the the scenario. You know, it's funny, opioids have the ability to increase pain actually. There's a situation where people take opioids and they actually up regulate their pain. So you have people that come in and say, I have this pain, I took this pain medicine. I was okay for a minute then I was a lot worse.

Darin: What is that from? Just a different--

Dr. David: It's called an opioid hyperalgesia, which just means it's just a heightened sensitivity to your nerves. Actually, the pain nerves. But it's a real thing that anesthesiologists know all around that this sort of thing happens, but we don't really talk about it. It's a problem with pain medication, you take it and you develop a tolerance and then now you're really behind because

you can't now live your life without getting that medicine back into your system. Your system won't function properly without it.

Darin: For you, are those studies coming together? And has it got a funding and also is there are other people trying to push some funding, I would imagine?

Dr. David: CBDs is all around in terms of wanting to make that happen. And hopefully, in the community of caregivers that we can share information. And I have a friend who has been able to get the IND done and he's moving into a study. And so if we can be one portion of that study or we can use that information to branch off into a different study, that's really where we need to go forward is just say, all right, CBD here to stay. Opioid crisis is not going away. We need to come together and figure out how we're going to move this forward. And if CBD is the answer, let's figure that out sooner rather than later.

Darin: Obviously, there's some serious problems in the system, serious problems in the prescription, just like you said, certainly eliminate the numbers that can get pretty profound pretty quick. I don't know what the stats are on hard core street drugs as opposed to these, but I would imagine those numbers are astonishing in terms of the prescriptive side of things.

Dr. David: There's been a spike in obtaining it in a different way. So heroin was sort of flatlined in terms of deaths per year for the longest time until around 2007. Whatever happened, there has been an influx. And if you look at Midwestern states, even like Ohio, Ohio went crazy with heroin and how that evolved or how that happened, I'm sure there are people that know that and understand that, but it just doesn't make sense in terms of just the logistics of it. But opioid is very high and we're still the leader in terms of overdoses in 2017. I think there were something like 72,000 overdose deaths, it doesn't make any sense to have. We talk about different illnesses and 72,000 deaths was more than AIDS at its height per year. So it gets swept. I don't want to be political, but it's not politically expedient to talk about opioids and heroin and how these things are causing problems because it shuffles back and forth. What's going on in rural America is different than what's going on in the cities. In rural America, there's a lot more prescription overdoses than in the cities which a lot more heroin overdoses. So from that standpoint, it needs to be just something where the doctors are aware, they need to be be cognizant of the fact that their prescriptions could kill somebody and it might not be the person you're giving it to. It could be someone who, you know, a 12 year old kid who sees an oxy prescription in the medicine cabinet of grandma's house and that is the last choice he makes.

Darin: What advice would you give someone who is in pain, who is a person that absolutely probably could go to the doctor and the doctor would give them a normal potential opioid, oxycodone, or whatever the choice is? And I think you laid it out exactly. I'm in pain now, what advice would you give that person?

Dr. David: It depends a bit on what's causing the pain. When you look at people who become addicts to prescription pain medicine, there's a certain for pre-existing conditions which can make it worse. One is fibromyalgia. So those people tend to modulate pain differently so they

have a higher risk. And if people have back pain going into surgery for any reason, they come out with a higher risk of being addicted, just by back pain.

Darin: And the surgery may have nothing to do with the back.

Dr. David: It's kind of interesting. The idea is that if you go into and you fell and you twisted your ankle, so you have an ankle sprain. Those sort of injuries, those acute injuries, people frequently will put ice on their injuries with the idea that it decreases swelling. Well, anybody who grew up in a snowy climate who threw snowballs without gloves on knows that your hands swell up if you throw snowballs without gloves on. And so the reality is that ice never was, never did decrease swelling. But our moms and dads and coaches told us to do that. It is a great painkiller. So to use regular icing is a form of pain control is a really smart idea. Even for sort of long term tendonosis problems. So if you have patellar-- we call it tendinitis or things like that, icing is great for helping to control that pain. So that's one strategy. But I think nonsteroidal antiinflammatory is Tylenol for short term motion things that get overlooked, like meditation, being able to really relax in a quiet environment is a very big deal in terms of coping with a lot of stress, and that's essentially what pain is. But you have to be really honest. That's why I talked about I really enjoy taking care of the people who have substance abuse problems that are honest about it and have recovered, of course, because they grab you onto their team right away. They say, I want to achieve this, but I want to avoid narcotics. And so now you go forward with a strategy rather than you say, your team, I'm going to give you some pain medicine. On my team, we're going to be over here in the office and we'll see how you do. So from that standpoint, I think it's really important if you want to try to avoid narcotics, just say that up front and say, all right, give me all the strategies that you have. No matter what it is, I want to explore it without taking an opioid. And I think that creates a team. Talk about this trust between what your doctor is giving you, if they're a physician that has your best interests in mind, which most of them do, then they'll say, all right, well, let's see what we can do. Let's figure something out.

Darin: Well, to your point, they all do. But then there's some but just with a little more openness like yourself, someone like yourself. You're open to a little more of an exploration rather than just the clinical side of things. Whereas you could add in some CBD, you could add in some curcumin, you could add in some other kind of dampening herbs to help with maybe the information. There's a lot and then I go back to the foundational stuff. It's like no one's going to be great if you're not sleeping and you're eating like crap and you're dehydrated. I mean, the root of all.

Dr. David: Just like every college student in the world.

Darin: Exactly. I know. I know. It's just astonishing. Well, doc, this is awesome. What a great conversation and I'm having conversations with people like you who are enough in the system but also enough critically looking at ways that we need to shift our perspective and the way we're doing things so that we can just deal with the flaws of our humanity a little better than we have been.

Dr. David: I mean, I think that if we all got to live in a place like this where mountain lions walk by and breeze is coming through your home, things would certainly be a lot a lot easier to cope with. But the reality is we live in lives that don't allow us to have those sort of peaceful moments. So we have to be intentional about creating. I mean, they don't have to be in a Shangri-La like this, but they need to have times where you are quiet and alone and get good rest and could be a better husband, wife, boss, employee just understand that the craziness that's going on in the world, that doesn't need to be your world, your life.

Darin: Doc, I think that was probably the best medicine that you could possibly give people right now. Just be a little more quiet and listen to yourself. We all need that because it's life. If we're not doing it, we're being yanked around by something and some other weird point of view. So we need to just kind of give ourselves a time out and take a breath, close your eyes, go inside and just go, hey, you know what?

Dr. David: It's going to be okay.

Darin: Yeah. Thank you, brother.

Dr. David: Alright, man.

Darin: Appreciate it.

Dr. David: Thanks so much.

[01:01:56] Generic Outro

Darin: What a fantastic episode. So tell me, what is one thing you got out of today's conversation? If this episode struck a cord with you and you want to dive a little deeper into my other conversations with incredible guests, you can head over to my website, darinolien.com for more episodes and in-depth articles. Keep diving my friends. Keep diving.

[01:02:33] Amplify Plug

Darin: This episode is produced by my team at Must Amplify, an audio marketing company that specializes in giving a voice to a brand and making sure the right people hear it. If you would like or are thinking about doing a podcast or even would like a strategy session to add your voice to your brand in a powerful way, go to www.mustamplify.com/darin. That's www.mustamplify.com/darin.