

Dave: A lot of people on the Bulletproof Diet, or people who are controlling their own biology, by doing things to take control of their health, are having trouble, because they overpay for life insurance. Life insurance companies haven't caught up with new science studies, that look at how different diets affect how long you're gonna live. For example, you're on the Bulletproof Diet, you have your Bulletproof coffee, and by design, your HDL cholesterol may go up. And HDL is called good cholesterol, because it's protective. But life insurance companies believe all cholesterol is bad, even though inflammation's the problem, not cholesterol. And that means they may charge you more, or they may not give you a discount on your life insurance, even though what you're doing is going to make you live longer, so their costs will go down.

There's a company called Health IQ that advocates for health conscious lifestyles. They use things like science, and big data, to get lower rates for people who are paying attention to their health, things like cyclers, runners, people who exercise, vegans, vegetarians, Bulletproof Diet, doesn't really matter, people who are paying attention. And they have a proprietary metric called a high health IQ. And people with a high health IQ are 42% less likely to be fat, and a 57% lower risk of dying early. Most of the time, you don't know your health IQ, and you probably don't know you can save some money on life insurance by getting your health IQ.

Right now, people listening to Bulletproof Radio can get a free life insurance quote, and learn their health IQ, by going to HealthIQ.com/Bulletproof. Just go to HealthIQ.com/Bulletproof, to learn more about how you can get life insurance for people who take care of their own biology.

Announcer: Bulletproof Radio, a state of high performance.

Dave: You're listening to Bulletproof Radio with Dave Asprey. Today's cool fact of the day is that bacteria might actually be able to fight PTSD, or post-traumatic stress disorder. There are researchers right now using a bunch of gut bacteria, to improve stress response from U.S. war veterans, who are suffering from PTSD. If you've listened to Bulletproof Radio for a while, you know that I've personally had PTSD, and it's a factor in a lot of executives' behavior patterns, they don't even know about. In these new studies on veterans, participants are getting a mixture of *Lactobacillus reuteri*. By the way, I have no idea how to say that in Latin, because I actually don't speak Latin. In, I believe it was fourth grade, I learned to say mors ad Latium, which is basically, "death to Latin." That's all I remember from the one quarter of Latin I had. But that would be my oppositional defiant disorder.

All right, where was I going with this? Anyhow, you get this cool *Lactobacilli reuteri*, and that comes from human breast milk, and it lowers inflammation. They found that when they use this stuff, that it lowers PTSD symptoms, which is ridiculous. It probably happens because the gut bacteria brain connection can modulate the immune system, which lowers inflammation of the brain, which lowers the stress response, which means that you can handle fear better. These researchers also found that gut altered mice had more of something they called TPH2, which is an enzyme involved in making Serotonin, and the mice who got this stuff just had, generally, less inflammation. So who would've thought, not only can your gut bacteria make you fat and foggy, because they are not

working in your interest, they're working in their best interest. You just want to make sure that's all aligned, and get rid of the little bastards who don't belong there, and make sure the ones who are there behave themselves. At least that's just my advice to you. But who knows, they could do even more for your brain.

All right. Let's talk about a couple cool things before we get into the show. Number one, have you tried Bulletproof collagen protein? This is an amazing product, something I've been using in my Bulletproof coffee for a very long time, something I wrote about in both books, and something that's probably missing from your diet, unless you dress in a burlap sack, and make bone broth, which takes approximately 24 hours of boiling bones, where you stir them, preferably with your hair in a man bun. Okay, I'm just kidding. But you know what I'm saying? I actually do make bone broth at home, so I'm only making fun of myself, and my lack of a man bun. But it is a big commitment, and most of us are just too busy, and you don't get much collagen in bone broth anyway. You do get minerals.

What I do is I use the Bulletproof grass fed collagen protein, to get the amino acids that are present there, that are building blocks for bone, and skin, and joints. And people always say, "Dave, how come your skin looks so good?" And, well, I did take skin cells from my butt, and put them on my face, so I'm a butt-face. That could be part of it, because I have nice skin on my butt. But on top of that, it also could just be that I take an enormous amount of Bulletproof collagen, and I have for many years. I think that's part of why this all works.

The other thing you might notice, if you're watching on YouTube. By the way, I always do cool stuff on video. There's like, cool bio moderating stuff behind me, and whatever else. But you can go to [Bulletproof.com/YouTube](https://bulletproof.com/YouTube), to get a direct link to the YouTube channel, because I'm wearing some cool glasses here. These are the new, metal frame, high end, Bulletproof ... Sorry, these aren't Bulletproof. The new high end Biohacked, they're called True Dark glasses. These are the Daywalkers. This is one of the companies that I'm backing, and I helped them to get launched. This company makes glasses that block half of the blue light during the day, which causes your brain to relax, but doesn't completely eliminate the, so you don't have to walk around with those dark orange glasses, like I'm famous for wearing like, ten years ago, the blue blockers.

But what absolutely rocks my world is that they come in a set. You get the ones you wear during the day. They give you some blue light, but not too much. And then, you put on the night glasses. These are called the Twilights. And then, you look pretty much like a superhero. These are optical, patented filters, that filter out every spectrum of light that affects what's called the melanopsin center in your brain. Your mitochondria are deciding whether it's day or night. When you wear these glasses, the mitochondria in the eyes and your brain, are convinced that it's pitch black. So they act like noise canceling headphones for your eyes. You literally just chill out when you put them on. And when I wear them for an hour or two before bed, I double my deep sleep, on an average night. It's completely transformed my ability to sleep, and I'm immune from jet lag, even when I fly to Europe, even when I fly from Dubai and back in just a few days. It's completely, completely amazed me that they're this effective.

You can go to Biohacked.com. That's B-I-O-H-A-C-K-E-D .com, and the glasses are called True Dark. They are an amazing biohack. It's like, just a one time thing, and you wear them. More energy all day long, from blocking some of the blue, but you get enough of a signal to tell yourself that It's daytime, and you look pretty good, if you see this on video. Like, these are not crazy [inaudible] glasses. And the nighttime glasses will rock your sleep, like you've never seen.

All right, let's get into the show today. Today's guest is Dr. Jolene Brighton, and she's an expert in hormone balance, thyroid, and a functional medicine leader. And I met her through JJ Virgin, a mutual friend of ours. And what's interesting about Dr. Jolene, is that she's trained in naturopathic medicine, but also in biochemistry, so she goes a little bit deeper than you're likely to find. And she wrote a book called, healing your body naturally after childbirth, the new mom's guide to navigating the fourth trimester. And she's not on just to talk about that. We're going to talk about birth control We're going to talk about the pill. And I've been an outspoken advocate of not using the pill on the Bulletproof blog, since the very beginning of this, and there's very specific reasons. Mostly that I like women, and the pill is bad for women. I'm just saying it.

So Dr. Jolene's gonna help us understand that. And on top of that, we're going to talk about just general hormone problems, differences between men and women, nutritionally, and we'll get to some other cool stuff like traumatic brain injury. So this is gonna be a fascinating interview today, and I'm happy that you're here to listen to it. Dr. Jolene Brighton, thanks for coming on Bulletproof Radio.

Jolene: Yeah. Thanks so much for having me. I'm, I've been a big time fan, for a long time, so this is really exciting, to get to come on here and chat with you, and to be chatting about all the biohacking stuff, that you've been preaching about forever, that the research is finally catching up with, I feel like, and how we can apply that to just modern day society, and what we're seeing in people's health.

Dave: It's kind of funny. When I surveyed the Bulletproof listener base, and we've got about 50 million downloads, give or take, on Bulletproof Radio now. There are a lot of women that listen to the show, and a surprising number of people, at least surprising if you don't have kids, is people who have kids, like I do. Mine are around ten and seven. And everyone who hasn't had kids, doesn't know what's coming, from a woman's perspective. You're like, "Oh, I'm pregnant," and like, "Okay, maybe I threw up. Maybe I didn't." And you go through this stuff. My first book being about fertility, like when you're in alignment, all of that. But my book sort of ended at "Here's how to make formula if you're not making milk." And here's to have a good birth. Good luck with that. And then you're like, "Okay, here's what's going to happen."

So, let's go in, given that so many of us either have kids, or are having kids, or are going to have kids, whether you are a man or a woman, this is stuff you need to hear. We won't go too deep on that. We've only got an hour, and we've got a couple other topics. But what happens in a woman's body, after the baby comes out?

Jolene: Yeah. So this is not something ... We should just acknowledge that society's not talking about this a lot. Once upon a time, we mothered in tribes. There was a wise woman, she

guided us through all of this. And there was what was called the fourth trimester. So I call the fourth trimester the first three months after you've had that baby. Everyone's focus is on baby. So once baby's delivered, mom gets the six week checkup. "Hey, your vagina's looking okay. No signs of infection. Fantastic. Go upon your way." And when you're tired, you're exhausted, you start having symptoms come up, you're met with the diagnosis of being a mother, or a father. We see this happens a lot too with men, where doctors will just say, "Well, you've had kids, so of course you feel that way." And in reality, when you go through childbirth ... I mean, that's probably the most strenuous athletic event a woman's body will ever go through.

And if we really stand back and reframe this. If you were to run a marathon, for instance, or do an iron man, everyone would hold space for you to recover, and be like, "Oh, of course you have to recover from that." But for some reason, somewhere along the line, we got it in our head, that women should be able to pop out a baby, and then just go along their merry way, and at six weeks, everything's recovered and fine. The only thing that's recovered at six weeks is the size of your uterus, so that has shrunk. And that's what gave medical doctors this profound idea, that, "Oh, okay. It took you ten months for your body to grow this human, so you should be able to recover it in six weeks," which leaves a lot of women questioning, "Well, what's wrong with me?" Reality is that it takes a whole year to really rebuild the nutrients, and recalibrate our body.

Dave: Now, when Lana, my wife, who's a medical doctor, and co-author of the fertility book. When she, or so when we had kids, I caught both of the kids at home. So I say, we had them. And, afterwards, she described this mommy brain. And I ... Actually, it pisses Lana off when I say this, but that means I can say it. She's not in the room.

Jolene: It pisses every mom off. They hate that word.

Dave: Well the thing is, she's actually smarter than I am, but once we had the kids, she's like, "My brain doesn't work." She's like, "I have mommy brain. Like, what's going on here?" And I have a good friend right now, who's a CEO, and she just had a baby. And she's trying to go back to work at six weeks, and she's like-

Jolene: Oh yes.

Dave: "I don't know how to do what I could do before." What's going on there?

Jolene: Yeah. So that's a great one. Okay, so your brain does shrink during the third trimester, and it doesn't come back until about six months postpartum. This is evolution being super, super smart. And what's the whole premise behind this? It gets you hyper-focused on baby. You cannot multitask. You can only focus on baby's survival. However, we live in a society that demands multi-tasking. If you're hearing this, and you're freaking out, about your brain, just know that the research shows that moms actually, their brains come back, and if you tend to them, they actually come back stronger. So you're better at multi-tasking. Your corpus callosum, so both sides, both sides of the brain, are actually connected and talking better. But there's another layer to all of this,

and that is, when you deliver your baby, what follows is a placenta. And when you deliver the placenta, your hormones instantly drop to the level of a postmenopausal woman. And we know post-menopausal women have lots of brain fog. Estrogen levels are off. Progesterone levels are off. And couple that with the fact that mama's not usually sleeping. And so, maybe it's only three months of not sleeping. Maybe it's an entire year. But every time you're not sleeping, and you're spiking your cortisol levels at night. You're not wearing your amber glasses. And I actually have women wear red headlamps, so that baby's circadian rhythm isn't getting disrupted.

Dave: Oh hallelujah. We make these, or the company I'm backing, Biohacks, makes these special things that stick over all the LEDs, to change the optical spectrum to be more red.

Jolene: Oh, that's brilliant.

Dave: For that exact reason. Because it wrecks babies. I love that you're doing that. Okay.

Jolene: Yeah. Yeah.

Dave: Keep going.

Jolene: Well, because it's like, if ... So, it's always about root cause, right? Why isn't mom sleeping? Because baby's liver isn't developed. Baby is requiring nutrition every two to four hours, needs to be delivered to baby. So there's a maturation period that has to happen. But what's really interesting is so, and we'll talk about this with post birth control syndrome, because I clinically observe that we can't get women's hormones in balance. We can't do it if the circadian rhythm is disrupted. And there was actually just a research study, that was published in May of 2017, showing that the liver does not function the way it should, if the circadian rhythm is disrupted.

Dave: That's right.

Jolene: So yeah. Of course, we can apply that to women. We can apply that to mom. But think about baby. Baby's liver figure out, trying to figure out how to regulate blood sugar. That's one. Baby's tasked with a lot of things in the beginning. So if you're disrupting the circadian rhythm, by turning on the light every time you need a diaper change or a breast feed, then you're more likely gonna have a baby that's up longer. And who knows what the long term impact is, because we haven't started studying that yet.

Dave: Well, I think there's some good evidence, from a lady named T.S. Wiley, who wrote a book called Lights Out, Sugar, Sleep, and Survival. And she's also written one of the first books, just completely eviscerating the birth control pill, because of what it does. And I knew her personally, before she passed away. She gave me my first copy of her book, in person. And she's been saying the circadian problem is such a big thing, that for both of my kids, they've always slept in blacked out rooms. Blacked out curtains. No nightlights, no nothing. And what that does to parents, it frees you. Because your kids aren't afraid of the dark, because that's how you sleep.

Jolene: Yeah.

Dave: And, they sleep through the night, so then you sleep through the night. And your quality of life is ten times better if your kids don't wake up every five minutes, because they have a nightlight in their room that's keeping them up. It just drives me nuts when I see people like, "Oh look. It's cute. I got a nightlight." I'm like, "Kick it. It's bad."

Jolene: Yeah. Yeah.

Dave: Okay.

Jolene: No. We ... I even will tell parents, put your baby in the closet. Put the crib in the closet. If you can't get it dark.

Dave: Yeah.

Jolene: And I actually, I found these great, at Ikea of all places, they have these dark blue curtains, and I have patients use that. But, what I say is that, when all your lights go out, in your room, if you can still see anything, like if you're not tripping over stuff-

Dave: Yeah.

Jolene: And running into things, it's not dark enough. I always joke, my bedroom's like a cave, and we keep it that way.

Dave: Yeah.

Jolene: And my son's as well. And then we go and ... We have to open up the curtains in the morning. You know, you live in a similar climate as us. I'm in Portland.

Dave: Right.

Jolene: You open up those curtains in the morning. Otherwise you could sleep 'til ten, easily. But you know, when we couple the disrupted sleep. So if we've got disrupted sleep, and spiking cortisol, inappropriately, we're gonna destroy the hippocampus of the brain, which is memory consolidation. Can you get it back? You can get all of this back. I can't emphasize that enough. The brain is capable of tremendous things, but you gotta do this work. It's not gonna come back just by you thinking like, "Oh yeah. I'll just go about it like everyone else has." And we also have to recognize that we're pretty nutrient depleted, as women. I mean, as people as a whole, we're pretty nutrient depleted. So it's a pretty revolutionary thing, that we're seeing that more women are entering into pregnancy very nutrient depleted, and I think that in generations, we're gonna see the impact of that. And there's gonna be the women who read the book, like yours, and got really nutrient, got their nutrient stores up. And there's going to be the women who just didn't know, or they're following their doctor's advice. And I think, in decades from now, as sad as it is to say, we're going to see a contrast between those two cohorts.

Dave: We're going to see that their children, and their children's children, have different outcomes, the whole evo genetics thing.

Jolene: Absolutely.

Dave: That's-

Jolene: Because you are the sum of your great-great grandmother.

Dave: Yeah. That's what inspired me to do The Better Baby Book, which was my first really big focus book, had 1,300 references, took five years. And it's what we used to turn Lana's fertility on, but I was afraid my kids would have autism, because Asperger's runs in my family, and because I had Asperger's, or at least all the symptoms of Asperger's, as a child, and didn't really make eye contact very well, until my mid 20s. And I'm just a different human now, than I used to be. And people who knew me back then, know that I was a little bit different. I progressed as I went on. A lot of that is neurological inflammation. But I know my genetic weaknesses, and like, let's give my kids, at least, every advantage possible. And what I know is some of my limitations came from my mom and my grandmother. You know, Coke and donuts isn't an appropriate thing.

Jolene: Who knew?

Dave: But we didn't know that back ... We didn't know it back then. It was like, "Hey, I like Coke. I like donuts. Let's have it for breakfast. Why not?"

Jolene: Plus, back then, the advertisements were like, "When is it too young to start Coca Cola? Never. Give it to your baby in the bottle." I mean, this is why I think in our modern day, a lot more people are a lot more skeptical about medicine. Because, between the sugar and the cigarettes, a lot of people got sold a bill of goods, where their doctor was telling them things that wasn't in their best interest, kind of like what we've seen with the birth control pill. We pass that out, but we're forgetting to say that there are consequences that come with these things.

But I do want to say, I just want to honor you, in writing that book, because that's true preventative medicine. Forget taking your kid in for the wellness exams. I mean, that's great. We want to track them. But what really is preventative medicine is that we took care of that woman, and that father, before they ever made a baby. So, I just want to honor that.

Dave: Thank you.

Jolene: That was really important work that you were doing there, and it's, that book is gonna live on.

Dave: There ... I don't know how many babies are as a result of the book, but I've had a lot of people walk up and just, "Hey thanks. Glowing results." And you never know what

would've happened without it, so it's always hard to know, but I know that for us, Lana was infertile, and we have two kids, so I'm good with that.

Jolene: Yeah. Yeah. You got to your goal.

Dave: And also, I appreciate that you wrote the book about what do you do after childbirth, because even Lana, I think, was unprepared. And she's a medical doctor. They're trained in this stuff. At least, they're supposed to be. And she was partly unprepared, because the changes that happen, they affect how you think about yourself, like the very definition of you. You're like, I have this capability set, that I've always been able to rely on, and it's different. So, the decision making that you would've done, the motivation, the energy, all of those can be so dramatically different, that for a new mom, like, "What just happened?" And then you feel like maybe you're crazy, and you feel like you just don't have what it took to do it, before.

Jolene: Yeah.

Dave: And by writing the book about how to heal your body, we know, anyone who's listening to the show, and has for any of the 400 plus episodes, it's like, to make the mind work well, you've gotta make the body work well. It's very hard to do personal development, meditation work, if you can't regulate your blood sugar. It's not impossible. It's just really hard.

Jolene: Well, and it's like ... The way I frame that, to patients, is like, "If you don't meet the basic survival needs, consciousness is nice, but it's not necessary for survival. So your body is going to be very much primed to survive, however it can. It's like Maslow's Hierarchy of Needs. Until you meet those, you know, the safety, you can never really transcend to that next level. And we see that a lot. You can't meditate your way out of brain fog. Does it help? Yes. But we've gotta go deeper with that.

And you know, writing my book, your wife wasn't prepared. I wasn't prepared. I went through medical school, and I went through midwifery certification. Now, I decided not to catch babies, because I like sleep, and I saw midwives. They were a little bit scattered, and then like, I'm a high functioning individual. I need my sleep. But you know, it was after the birth of my son, I got the same thing. Six weeks. You're good to go. Bye. And then I started having all these symptoms come up, which turned out to be Hashimoto's.

Dave: Yep.

Jolene: And when I found out, once I went down the rabbit hole of research, was one in twelve women develop an autoimmune condition, autoimmune thyroid, as a result of giving birth. And when does the hypothyroidism peak? At the same time postpartum depression peaks. So, when I stand back and I look at that ... And it's really funny, because I wrote my book. People are like, "Oh, but your book is so short." I'm like, "Look, when you've got brain fog. I wrote my book to fit in a diaper bag, and get to the point right away."

Dave: Yeah.

Jolene: Because moms don't have time to be like, "I have mastitis. Let me read all about that." They don't care. They're like, "How do I fix this? When is it time to go to the doctor?" Because you are in that brain fog state.

Dave: It's funny. I'm laughing because Lana did develop a thyroid condition, afterwards. And, okay, I'm not a doctor. I'm an unlicensed biohacker. What do I know? I've got 20 years of running an anti-aging nonprofit group, but really, I'm not a clinician, I just know a lot of stuff, and I'm an event correlator. So I said, "Lana, you have a thyroid problem." She goes, "I'm a doctor. I don't have a thyroid problem." I'm like, "No. You have a thyroid problem." And it took like a year, before she was like, "I guess I'll get it checked." And she got it checked, they're like, "You have no thyroid hormone. It's surprising you're walking around." I'm like, "She's not walking around. She's laying around."

Jolene: Yeah.

Dave: So let's really hope she didn't hear this episode, right?

Jolene: No. I'll totally out myself. It was my husband who actually ... So here's the thing-

Dave: Really?

Jolene: That's really important for people to understand. When you're living in your body ... What I tell patients, it's like reading a book that's right up against your face. You need someone who can stand back, read all those words for you. You know everything. You have all the information, but you're just too close to the source. And it was when I woke up, at the breakfast table, after falling asleep, after 15 hours of sleep. I slept 15 hours, fell asleep at the breakfast table. My husband, he wakes me up. He's like, "You're sleeping all the time. Your hair's falling out. Your skin is dry. You have brain fog. You're depressed. I've never seen you depressed in my life." And as he listed it all to me, I was like, "That's hypothyroidism." And I had seen several doctors, naturopath, functional medicine, medical doctors, trying to get help. Why do I feel like this?

People were running incomplete panels. People were brushing me off as being a mom, and that's what really launched me into this, is like, Okay, nobody is talking about this, yet the American Thyroid Association has acknowledged these things for decades, and we're even seeing in the alternative, and functional medicine, and integrative space, that we're lagging behind, in terms of our knowledge around women's bodies as a whole, but how impactful, just the birth of a child can be for a woman. And you know, when you look at the statistics, who's gonna get autoimmune disease, it's women. The number one triggering event for most women, if having a baby, because once you deliver that baby, your hormones drop, and then your immune system flips. Your TH1 comes back online in full force. And then you go into poor eating habits, lot of stress, poor sleep habits. Is that a fault of you? No, no, no ladies. That's not your fault. That's really about society not being set up.

Dave: Now, it's your husband's fault. Come on, let's put the blame ...

Jolene: See, but I don't actually think men, like if you just look at men's role, evolutionary speaking, and you look at everything, and when do men bond with babies. You know, it's more when they're toddlers.

Dave: Yeah.

Jolene: When it's time to take them out and show them into the world, and in the beginning, it's more of mom. There's all these roles that we fulfilled, which ... I just say that modern motherhood is an evolutionary mismatch. The entire human race would've gone extinct, if we were ever meant to do this alone. It's just impossible.

Dave: Lana and I actually think that the brain shrinkage for new moms, if evolutionary, because anyone who had their full brain, would A, probably not choose to have kids, when they knew it was gonna be like that. And B, they'd be like, I'm so tired of holding this screaming thing that keeps waking me up. I'm going to leave it for the coyotes.

Jolene: Yeah.

Dave: Now, we all love our babies. No one's really going to do that. But a thinking person, with their whole brain-

Jolene: But it's hard. We can be real with that.

Dave: There is a limit.

Jolene: Yeah.

Dave: And when your brain is smaller, you're like, "Okay. I can deal with this."

Jolene: Yeah.

Dave: And so like you said, it's the hyper-focus, the waking up all the time, even if you didn't before, because now, the slightest sound, "Oh, it's the baby." And you're like, "How could that wake you up?"

Jolene: Yeah. And they train you. It's what I call the mom curve.

Dave: Yeah.

Jolene: So after a year, if I test women's adrenals, they don't spike cortisol in the morning, they spike it at night. I call it the mom curve. It's always opposite. And every time I see it, I'm like, your baby trains you for their survival. Good job, baby. Now, let's bring that back around. And you can recover that. You absolutely can. You've gotta do the work.

Dave: All right, let's talk about, should people have new babies, should they co-sleep? Should you put the baby in the bedroom attached to the bed? Should it be between the parents? I didn't do that because I'm like, 200 plus pounds of solid muscle. Okay, maybe. New York Times said I was almost muscular. I'm still owning that one.

Jolene: What? No.

Dave: Oh they truly did.

Jolene: Oh.

Dave: No, I'm like "Hey, people who live the longest are almost muscular. You don't want sarcopenia, but if you're like a balloon animal. No offense body builders.

Jolene: Yeah.

Dave: I'm in awe of your skills. This is probably not an anti-aging strategy.

Jolene: My graduate research was in sarcopenic obesity, and how we actually prevent that, using amino acids, namely branched chain amino acids, so I love that you brought that up.

Dave: That's so cool. That's totally ... I love it that you studied that. So, we could ... So I didn't want to put the baby in the bed, because I'm a deep sleeper. I would roll over and be like, "There's something underneath me. Oh." That's not good.

Jolene: No.

Dave: So what do you think though, for moms and for dads, and for babies, do you put the baby in the room right there next to you?

Jolene: Yeah. I think at the end of the day, it's about what works for you and your family. It's the same thing with breast feeding. You know, these things are very individualized choices, so if we stand back and look at the lens of how did humans actually develop, before our environment rapidly changed? In terms of that, we were all together. We were all co-sleeping, and there has been great studies in terms of hormones, and decreasing stress. And moms tend to get more sleep when baby's right there, because you just pull the baby over, breast feed them, and fall asleep. But, if you have an adult in the bed who's a super deep sleeper, or is on sleep medications, or, heaven forbid, is a drug or alcohol abuser, that baby's health is gonna be compromised, because that baby could be rolled over on.

And new babies are super small. People think, "Oh, I'll hear them." They're super tiny, and not all of them are super noisy. And so, really, I've had women that, when baby is in the room, they can't sleep. They get no sleep whatsoever. And in those situations, it's like, we've gotta get baby outside the room, because now they're starting to have anxiety, and panic attack. And they're starting to feel these mood symptoms come up,

which is something I want to prevent them from ever getting into a doctor's office saying, "Let's get you on anxiety medication or SSI, because that's not really the root cause.

So that's why I frame it of like, yeah, it's great for mom and baby, if you're both in the same bed, same room, until it isn't. That is something that you really have to reflect on, from the individualized perspective, of if it's disrupting your sleep, if it's creating anxiety, if there's anything disruptive to the whole family dynamic, we really have to look at that, and reframe what's most appropriate for your family. Does that make sense?

Dave: It makes a lot of sense. So you're basically saying, do what works, but that there's maybe a bias for having the baby there.

All right, so then there's another question, that every new dad has been asking, since the dawn of time, and this, I'm just gonna have to go there. How soon can I have sex with a new mom.

Jolene: Yeah. So, we say wait until the six week checkup, because at the six week checkup, that's when a woman is going to be examined, and we're gonna look for things like infection, if there's still trauma. And that's what can really guide us, because if something's still going on with the cervix, or we're having heavy bleeding. The thing is that when we get turned on, as women, our uterus is going to shift a bit. Our vagina and uterus go through this whole change to accommodate a penis. And if we can't accommodate that penis, it can become very painful and uncomfortable.

Now, prior to the six weeks, I am all for anything else you want to do, besides vaginal penetration. And the reason for this, you know, I actually got some flak, because in my book, I'm like, "You've gotta explore your new terrain, and you might want to use toys," and all this stuff. And there's always these people that are like, "How dare you tell a new mom to have an orgasm."

Dave: This is a mother.

Jolene: Yeah.

Dave: She's a saint.

Jolene: Yeah.

Dave: You can't do that to a mother. Yeah, okay. Whatever.

Jolene: And here's the thing. All of us should be trying to have orgasms, like one to two a week, because we will live longer. Our DHEA and our oxytocin levels are gonna be better. So if you want your wife to bond with you, please her, so that baby's bumping oxytocin. You're bumping oxytocin. Now she's swimming in bliss. But also we know, that women who orgasm regularly, they have better immune system modulation overall, so their inflammatory markers are lower. So you've got a new mom, you want to prevent some

postpartum depression ... Now, of course, there's no research in this. But I would venture to guess that if you're having an orgasm once a week, you're gonna have a better mood, and better outcomes overall.

Dave: There are definitely studies on EQ in women. Women who have more orgasms have higher emotional intelligence. There's some cool stuff there.

Jolene: Yeah, but in terms of postpartum depression, I don't know if we have that yet. Because exactly what you said, people are like, "Oh now suddenly you're a mom. We can't talk to you about sex."

Dave: Yeah. That's a problem. But okay, so here's the flip side of that. Six weeks is the bare minimum. But how soon will it be until a new mom wants to have sex? Is it like five years? Or seven?

Jolene: Oh, seven years? No.

Dave: I was just kidding. There are changes in libido for new moms.

Jolene: I'm like, that's horrible. If you don't want to have sex, you need to come see me, because here's the thing, we are driven. I don't care if you never ... If you never want to have a baby, that's totally fine by me. But you should always be fertile and wanting to have a baby, or wanting to have sex, as long as you're in those fertile years.

Dave: It's a sign that you're gonna live a long time.

Jolene: Yes.

Dave: Sick animals don't want to have sex or reproduce, right?

Jolene: Yes.

Dave: It's okay if you don't reproduce, but you should at least want to do the act.

Jolene: And it's a big thing that gets dismissed in women's medicine. Having an orgasm is this mythical unicorn, and women aren't that interested in sex. But when you look at the research, there are so many benefits. Even if you want to have a fertile cycle, as a female, it's harder to get there if you don't engage in regular, and really it's better if you have a partner, but you can manually stimulate yourself as well, and get there, and that can help, get there in terms of orgasm, and that can help with immune system and hormone modulation overall. But it's a big problem.

So when will moms want to have sex? Here's the thing. Foreplay for women, is when you go the dishes, you take care of the kids. When you're doing these kind of acts of service.

Dave: Oh, by the way, that can be outsourced, just for guys. It's okay to have help doing those. You don't actually have to do it, they just have to be done. Like, having an empty sink is foreplay. It doesn't have to be that you did it, unless your wife is mean, in which case, well, you know.

Jolene: Yeah. Yeah. Well that's a different story. That's a different kind of doctor.

Dave: Exactly.

Jolene: But, you know, the deal is, I will see woman who will say ... I just has this patient, that she hasn't been interested in sex for three years, since having her child. We're working on a lot of the hormone balancing. We're working on all of that. Everything's good in her relationship. She's like, my husband actually does take care of stuff, and I really, you know, I do appreciate that. But she has a propensity towards anxiety. So women are usually ... This is the thing I gotta say, is that in modern medicine, women get basically a diagnosis, for things that are normal behavior. The behavior like making sure everyone is taken care of, is why the tribe survived. But now, because we don't have that tribe, it's seen as like this neurotic, bad behavior.

So, when women want to have sex is really gonna depend. There's so many variables on that. But if it's not coming back after the first three months, like any inkling of that, then I want to know about it. Then we need to start talking about it, and investigating what's going on, because we can also have nerve damage and trauma to the pelvic floor. And if that's happening, I don't want a woman waiting six years before someone intervenes. Let's get some pelvic floor physical therapy going, which, in France, and some of these other countries, that's just par for the course. If you have a baby, you're getting prescribed a dozen pelvic floor rehab sessions, because they know, and understand that uterine prolapse, and these problems we see in women in their sixties, are actually a result of women in their 20s and 30s giving birth, and not being cared for appropriately.

Dave: There's another thing that's less talked about, and I want to get your take on this. When a woman has a baby, and to a certain extent, even a father, but it tends to affect women more. If the woman experienced extreme stress, or the man did, at that same age, you can get PTSD symptoms that arise, that some seemingly out of nowhere. So if the mom or the dad was abandoned, abused, dropped, something bad happened. Parents got divorced. Even a year later, "Oh my kid's 12 months old, and suddenly I just went bonkers."

Jolene: Yeah.

Dave: And this can actually be not just hormonal, it can actually be psychological. And it's not psychological like you didn't think about it, you didn't want it, it's that your body just sees a baby that age, and it remembers what you were like at that age, and it's like, "imminent death."

Jolene: Yeah.

Dave: And then you're like, "Oh my God. I feel like I'm gonna die, and I don't know why." Do you see that a lot? What's your take on that?

Jolene: Yeah. If you ever wanted to exponentially work on yourself, have a baby.

Dave: True.

Jolene: Because they seriously reflect everything back to you, especially once they can start parodying. And when you hear things, and you're like, "Oh I don't like the way that came out of that child's mouth. Oh, that's because it's coming out of my mouth. And now I've gotta re-examine that." What we do, a lot, like this get onto the mind, body, and even spiritual level with things, is we do sorting the buckets, where, when you start to feel those emotions come up, you need to ask, "Is this mine, or is this theirs? Is this baby stuff? Is this warranted that I freak out about this, or is this my stuff?" And then, to do the unthinkable thing, but actually sit with your discomfort, to sit with your pain, and try to understand and work through where that's coming from. If it's significant enough, that's when, definitely, I don't hesitate, in these situations, to bring on ally mental health workers. Certainly not people who reflexively prescribe drugs, but people who get that there are past traumas, there are things that we can't even understand. Maybe it happened as a child. Maybe this was something happening in utero. Maybe this is something like, as we know, for instance, that we know from studies like Holocaust survivors, and their family lineage, and what happens with them.

Dave: Yeah.

Jolene: It's entirely possible that we actually have to go back, and heal that female lineage, of all the moms who gave birth.

Dave: Yeah.

Jolene: Which is, first, you've gotta heal your body. Then you've gotta work on your mind and yourself, and then you've gotta go back and do that big level work.

Dave: Hold on a second. You're a naturopath. You're a scientist. Did you just say heal the lineage?

Jolene: Yeah.

Dave: How could you say that? Shame. All right. Sorry. Alberto Viodo has been on the show, a well-known Shaman. I've done his training in Ayahuasca. Yes, and I'll even tell you, I've had people deep forgiveness work at 40 years of Zen, the neurofeedback thing.

Jolene: Yeah. Yeah.

Dave: And strangely, their estranged mother will call them that same day.

Jolene: Yeah.

Dave: I can't explain that. It just happens. But yeah, there is family line healing, whether it's just perceived by you, but it is healing.

Jolene: Yeah.

Dave: And I've just gotta applaud, EMDR is a very powerful thing, for either moms or dads, who are just wiggled out by this, by pregnancy, and just stuff you wouldn't think would happen afterwards.

Jolene: Yeah.

Dave: This is a very fast form of therapy, where you move your eyes, kind of, to reset mode. And neurofeedback has been, for Lana and me, a really big thing.

Jolene: Yeah.

Dave: I want to shift gears a bit, from the pregnancy side of things, to talk about what happens before pregnancy. Let's talk birth control.

Jolene: Yeah.

Dave: I wrote a blog post about this a while back, and I'm like, "Look, the pill is just bad for you. If you care about the woman in your life, tell her to get off the pill." It's that straightforward, and I took a lot of flak for that. Like, "well, you can't tell her to get pregnant." I'm like, "I'm not telling her to get pregnant. I'm not telling you to not be cautious. I'm telling you to maybe know when you're fertile and not."

Jolene: Yeah.

Dave: The downside is just so extreme. What is your take on the pill. And granted, I just maybe stacked what you're gonna say about it, but tell me what you think.

Jolene: Yeah. So let's just acknowledge this. There are some women who absolutely cannot get pregnant, and the only way they know how to avoid that is with the birth control pill. I actually spent many years working in a homeless youth clinic, so basically, harm reduction was the name of the game here.

Dave: Yeah. Absolutely.

Jolene: And that's where I see it, is like, I was a woman. I was on the pill for over 10 years. Wish I would've known what I know now, but it's something, when I look back, of like, "Okay. I'm a first generation college student, and I became a doctor. I was the first woman in my family not to get pregnant before age 19. Hallelujah I had the pill, so I could be where I'm at today.

Dave: Yeah.

Jolene: So, I just want to acknowledge. I'm not gonna shame anybody, if you're like, "I've gotta stay on this pill." But let's really dive into what doctors are not telling you. Because there's a whole lot that we've known for decades, that really nobody's talking about, and we're not seeing women getting the true parquo. And, what that is, for people, is before your doctor prescribes you anything, they should do a true informed consent, which is, "here's all the pros. Here's all the cons. Here's how it applies to you," and really then it should go into your court. "Okay, what do you want to do about it?" Unfortunately, what we're seeing of the 100 million women worldwide, who have taken the pill, about 60% of them are only taking it for symptoms, which is a huge red flag to me. If only 40% are taking the pill to prevent pregnancy, then what's up with this other 60%, and why are we not practicing root cause resolution, which we could absolutely do, and just giving women a pill.

To me, this is a huge disservice in women's medicine, and I really want this to be clear. Because the second we start talking about this, I've had people call me the anti-Margaret Sanger, and say "You're not a feminist. You don't look out for women." And I'm not about that at all. At the end of the day, I want you to make the decision that's best for you. I don't want it to be anyone else's decision. I want you to be confident that you got the information you needed. And if you choose to take the pill, I've got your back. And if you choose to come off the pill, it's gonna be hell. We can talk about post-birth control syndrome. But I've totally got your back in that as well. So, what is the pill doing at big level?

Dave: Yeah.

Jolene: Like, let's just take a big overview. So it's definitely causing leaky gut, so that daily bolus of estrogen. It's inducing leaky gut. It's skewing your microbiome. It's causing estrogen dominance. Hello, your brain, your heart. Nobody's gonna be happy about that. It's disrupting thyroid hormone on every level, and so when you think about women in their 30s are five to eight times more likely to develop a thyroid condition, and then you compound the pill on top of it. We're really raising risk factors here. We know that it turns on certain auto immune diseases, so there was actually a study, several years ago, that came out and said, if a woman's on the pill, has a family history of Crone's disease, then after five years, she has a 300% increased risk of turning on that auto immunity. Those researchers then said, we should at least be asking about family history, if not genetically testing women, before we start them on the pill.

And, as we all know ... Okay, that research study was about five years ago. It's gonna be 12 years before conventional medicine even acknowledges this, and to me, as a woman, when I think about my sister, my mother, my friends, I'm not about to stand around for 12 years and allow countless numbers of women to be basically mishandled, mistreated, and not to mention dismissed when their symptoms like depression and anxiety crop up, and they're on the pill. We just saw a study with over a million woman, that we saw, "Oh yeah. There's an increased risk with depression on the birth control pill, and how quick was ... NPR was one of them, so quick to dismiss that. So quick to dismiss it.

But in this ... You know, it's really crazy to me. So there's this well acknowledged medical gender bias, when it comes to the birth control pill. For instance, in the same quarter

that the birth control trial for men was stopped, because less than 5% of them were having depression, a new IUD was released, that was noting about over 20% depression in women. Women were leaving the trial because of depression. The male study was stopped, even though the FEC was great, and the men in the study were like, "It's not so bad. We even have increase in libido, and we're a little bit sad, but we have increase in libido." But they stopped the trial, saying that less than 5% was completely unreasonable for men, but then released an IUD with over 20% showing depression rates, and deemed that completely acceptable for women. What does this really come down to? At the end of the day, who carries the burden of pregnancy, and has to be avoiding it? It's women. They know they kinda got us with that. Not to be like there's a big conspiracy, but they've got us with that.

Dave: One of the other really scary things about the pill, that I've talked about a few times, is that ... In fact, in *Headstrong*, in my new book on mitochondria, I mentioned the fact that there's a hundred thousand mitochondria per cell in the ovaries. Men, we tap out at 15,000. Women and men, in our brain, we have about 15,000 mitochondria, these little power plants. In the rest of our body, it's 1,000, 2,000 or less. But, and your heart has a lot too. But why do women have that many mitochondria there? It's because they sense the environment around you very carefully.

Jolene: Yeah.

Dave: And there's a reason that your man smells sexy to you, and it's because your mitochondria, these ancient bacteria, are finding another Petri dish for them.

Jolene: Yeah.

Dave: They're bacteria that want to reproduce. When you're on the pill, it messes with your mitochondria.

Jolene: Yeah.

Dave: So they will, it'll change how your man smells. And there are people out there, and this is shown in studies, where they fall in love, they get together, they're sexually compatible. The woman's been on the pill the entire time, and the way the man smells, smells good to her.

Jolene: Yeah.

Dave: Because she's on the pill. She goes off the pill, and then all of a sudden, her physical attractiveness to him goes away, because he's not biologically compatible with her. They're not gonna have healthy babies.

Jolene: Yeah.

Dave: And her mitochondria knew it, even if she didn't. And this is something that happens. I'm like, before you get married, go off the pill.

Jolene: Absolutely.

Dave: Just to see if you're still attracted to each other.

Jolene: I mean, so this is what blows my mind, is like, I really am questioning the long term impact of the pill, in ways that we're not even looking at it yet. We have seen, when the pill was introduced, we see our rises in auto immunity, and autism, all these things, at the same time we were seeing the hygiene hypothesis, our food was changing. We know all these factors are definitely multi-factorial. But what's interesting to me, is if you look at these studies, when you're on the pill, you're attracted to who's genetically, like, your cousin. You're basically attracted to your cousin. It's kinda gross and weird, I know, when I say that, but you ... So when you're attracted to your cousin, what does that mean for your baby? That means that your baby's not getting genetic diversity, and in that, their MHC complex, which this is the whole mechanism on the cell of how we get auto immunity, how we fight viruses, bacteria. It's not as robust. It's more fragile. It's more likely to create auto immunity.

And so, can I say there's research showing this? No, but we can start to think about it, and frame, what is this impact that it's having on the human race, overall. We know that the pill actually changes the genes, in the liver, to forever have a woman create more sex hormone binding globulin. That means her libido's going to be lower. And okay, libido's going to be lower. That's a problem, but not enough testosterone in our brain, and our heart, and our bones, they're going as well.

Anecdotally, I've known my husband for ... I knew my husband for a decade. We went to community college together. I was on the pill the whole time. And then, we met back up in Portland. Randomly, one day, he was like ... This is back when I drank beer. He's like, "Hey, I bought a green army tent. Do you want to come drink beer with me in an army tent?" I was like, "Sure. Why not? That sounds fun." This is totally me in the college days. I was off the pill. I meet up with him, and suddenly, I am so attracted to this guy. And I was somebody who was like, "I'm never having a baby. I never want to have a baby. I'm okay not having a baby." After I met him, and being with him, I was like, "I have to have a baby." The biology was so profound. And it's like, yeah. That's totally anecdotal, but I've had enough patients say the same thing to me.

Dave: Yeah.

Jolene: I got off ... And I make these jokes. Is the pill to blame for your bad boyfriend? Why are we choosing the men that we're choosing? But if we think about that, it's just like, how are we actually impacting the genetic lineage of the human race, in women who are flooded with these pills? We're not talking about a hand full of women. Right now in America, it's about 11 million women, who are on this pill. That's not a trivial number, by any means.

Dave: This is an important episode of Bulletproof Radio, because a lot of people don't talk about that. Let's also talk about the post birth control syndrome. What happens when a woman goes off of the birth control pill?

Jolene: Yeah.

Dave: Like, what should she expect?

Jolene: Well, she should expect whatever symptoms she had, that made her stop the pill. Ladies, if you had acne, if you had PMS symptoms, if you had heavy periods, lots of cramps, even mood symptoms that were cyclical, we can expect those things to come back full force. And this is how I explain it. It's not your body rebelling against you. If you think about if you had something really important to say for like five years, ten years, however long you're on the pill. Finally, you get the opportunity to say it. Your body's screaming.

Dave: Right.

Jolene: "I wanted you to know about this all along." So that's one thing that we'll see. We'll also see what's called post pill amenorrhea. Now here's a big one that doctors don't tell women, and this one is a huge disservice. What's the number one non birth control related reason to prescribe the pill? Irregular menstrual cycle. So the doctor tells the story like this. "You're not having your period? We can help you have your period naturally by using this pill." No, sorry doctor. You are flooding that woman's brain, and overriding her pituitary, and then withdrawing that drug, so that her endometrium sloughs off. They just bails, endometrium bails, then we have a period. There's nothing natural about this. But, with all of that being said, with the PCOS piece, we know that ... Or excuse me, the irregular periods, we know that can often be due to PCOS. And PCOS is a metabolic disorder. So now, you put a woman on the pill, you mask the hormone symptoms, and then what do you do? You let her go for 10 to 20 years, with heart disease and diabetes developing, and nobody's putting that together. Never mind the pill is inflammatory, making her more insulin resistant, and depleting nutrients. There's a huge problem here. But when a doctor prescribes a pill for irregular periods, the research tells us that about 30% of those women will be rendered infertile when they stop that pill.

Dave: Whoa.

Jolene: So we're talking almost 40% of women will never see their pill come back. And what breaks my heart, is that I gotta be the doctor to tell them this. And they come into my practice and say, "I really wish my doctor would've just told me this. I was 15. I was 16. I was ... " You know, some of these gals are 12, and they're being told ... I get patients in their 50s. They've been on the pill since they were 12, and their doctor's like, "Oh, you should just stay on the pill. It's better than that bioidentical stuff anyways." And I'm like, "Wow. Have they talked to you about your stroke risk, about your risk for a heart attack?" I mean, since the 80s, women have been dying from heart attacks at higher rates than men. This pill is inflammatory. It's inducing immune system chaos. This is a perfect recipe for having a cardiovascular event. Not to mention, can we just do some long term studies of what we're doing to women's brain on this?

Dave: All right, that was an awesome rant. I want to [crosstalk] that.

Jolene: I'm sorry. I like ...

Dave: No. No. No. That was a compliment.

Jolene: You know this is like, my jam right now.

Dave: No. You needed to rant on that. I couldn't have put it better myself. And that's why I'm like, just get off the pill. Right? And it's really weird. I've been in relationships ... I've known this for a long time, because of the anti-aging work I do. I've been in relationships before I was with Lana, and I'm like, "No really. Get off the pill." And they're like, "What are you trying to do, get me pregnant?" I'm like, "Trust me. No. I don't want that."

Jolene: It's harder to get pregnant than you think. I get women all the time that are like-

Dave: Yeah.

Jolene: I never would've taken the pill, if I realized that I only had this six day window to get pregnant every month.

Dave: Exactly. And the rest of the time, it's pretty safe, especially if you're in a monogamous relationship. You're not gonna get any weird diseases that way. And it's one of those things where, it was always a little awkward, because normally it's the other way around. "Go on the pill. Go on the pill." It does require a higher level of awareness. But if you care about the woman that you're with, and she's not aware of this stuff, it's important. Because if you care about them, you want them to have functioning biology. You want them to live a long time, and have enough testosterone, enough of the other hormones. And if you're a guy, and the woman you're with doesn't have enough testosterone, you're not gonna like it. Because when women have enough testosterone, they have great libido. And when they don't have enough testosterone, they just don't care about sex.

Jolene: And they cry all the time, which is not fun.

Dave: Yeah. It's totally not fun. You have to schedule your business trips when they're gonna be crying. It's so much work. No, I'm totally kidding.

Jolene: Yeah. For your outsourcing to your personal assistant. It's so much work.

Dave: All right, so now people have to be asking, "Okay, if I'm not going to start the pill, or I'm gonna go off the pill, what is the best, most biologically compatible form of birth control?"

Jolene: Yeah. I am a huge fan of fertility awareness method, and it's actually like, everybody ... You know, you're taught ... I went to naturopathic medical school.

Dave: Yeah.

Jolene: They're like, "you don't ever teach that. That's a big no-no." So I had to go dive into the research, and look at this, because fertility awareness method's what I've been using. I never tell-

Dave: It's cool.

Jolene: Yeah. But I tell people, "Don't do what your doctor does, or your friend does. You gotta do what works for you." I use this really cool piece of technology called Daisy, and it's just a thermometer, that I put in my mouth, but it's super high tech. So, every morning I wake up, I put this in. Green light, go. Red light, no. We've got all of these color codes and everything, so it takes ... Back in the day, women would track fertility awareness method being like, My temperature, cervical mucus, all of this, write it on a chart, draw a graph. Now, because Daisy actually compares it to the hundreds of thousands of women that are in their system, it was amazing. Within my first month, it caught my period right away, and it knew everything, even though I wasn't so good at temping every single day, because I was developing a new habit, a new skill. But it caught all of that. So this is one that I'm like, ladies, if you just want to take a back seat to all of this, and you're like, I want to know more about my body, but I don't want to do all that charting, and I don't even own pencils. I mean, I don't ... I can't even imagine doing that level of charting. I'm like, if it doesn't live on-

Dave: What's a pencil? That's like a fax machine right?

Jolene: Somebody actually said the other day, "Can I send you a fax?" And I'm like, "People still do that?" We have electronic fax. My practice in a hundred percent paperless practice, and we're a high tech company.

Dave: There's a perfect answer. Someone says, "Can I send you a fax?" You're like, "If I can respond with an 8-track. And that usually end it.

Jolene: That's so good.

Dave: So a complete diversion from what you were saying there around pencils and tracking.

Jolene: Certainly. Yeah, too. I mean, you can use ... There's all these technologies. In Sweden now, they're like ... So in the U.S., they're like, "No. No. No. That's not birth control." In Sweden, they're like, "Yeah." These, like Lady Comp, which is what Daisy came from, these little technology pieces, they are considered birth control, in other countries, that don't have as much of a pharmaceutical interest. I'm guessing with that. But, there's so much data, that you can bring to your doctor. Us knowing when you're ovulating, us knowing whether or not you ovulated, when your period comes. If you are on the pill, you are missing out on tons of data. I'm a data driven lady. My background was in ... I was a nutritional biochemist, before I was ever a naturopathic doctor, working in recombinant DNA technology, so super nerdy. I'm a really data driven person. That's why I like Biohackers. They practice in the Bay Area. I love them, because they get it.

Dave: Oh. By the way, side thing, but it's related to this. Do you know about Viome?

Jolene: Viome? I don't think so.

Dave: V-I-O-M-E. Brand new startup. I'm on their advisory board.

Jolene: Yeah.

Dave: Me and Jane, who's like, one of the billionaire ... He's actually running a company that does, mining of the moon kind of guys.

Jolene: Yeah.

Dave: With the [inaudible]. What they're doing is, they're looking at RNA four times a year, from your poop.

Jolene: Oh wow.

Dave: So they can tell you fungal, bacterial, very species specific.

Jolene: Yeah.

Dave: Viral, even bacteriophage, that's going on, and full metabolic function.

Jolene: Wow.

Dave: So if, and it's all going through an AI system, so if you're into that kind of stuff.

Jolene: Yeah. Yeah.

Dave: Then Viome is totally up your alley. They just launched. And by the way, if you're listening to this stuff, you want to be like, to the front of the line, because there's a waiting list, you can use code Bulletproof. And I think ... I'm not gonna promise this, because I don't know when you're gonna hear this episode, but he has some copies of Headstrong that he's sharing with some people. I think if you use the code, you might get one, but I'm not promising.

But anyway, you would like Viome, because it's so quantitative.

Jolene: Yeah. Yeah.

Dave: And it ties right in. You could probably see a before and after of the pill, what it does to your gut bacteria.

Jolene: Oh yeah.

Dave: When you did something like that, because you're getting four tests a year.

Jolene: Yeah. I'm super into that, because we do, we do before and after. So, for instance, one marker is fibrinogen, and we see, oh my gosh, fibrinogenic on the pill, I've had women where I'm like, "You need to get off this pill right away, and I want you over to the cardiologist." Because inflammatory markers, fibrinogen is that. We're seeing things that are really unfavorable. I'm like, we just need to get an ultrasound. We to look up, look at everything, make sure that everything is working the way it oughta. But then you stop the pill, and you see the levels just start coming down. They just start coming down.

And so, you know, back to what I was saying about the data, when it comes to hormone testing, we've got our ways that we like to test hormones, but they're not all super accurate, and it depends on what's going on. But what is really helpful, is what a woman reports in her body. What are days one through three of your period looking like? Are you amped up for sex around day 10, the way you should be? Because we should spike testosterone, and then that makes us want to have sex, so that we capture sperm. Yes ladies, you actually capture and quarantine that sperm, so when you release an egg, it's there. It's sitting around for you. Are we seeing fertile cervical mucus? What's going on a week before your period, day 21 to 28? All of this information, that a woman can provide to a doctor, can really help us get honed in, not only on hormones, but on our overall health, and that's one thing that I really like about fertility awareness method, women not being on the pill, and being able to track these things, is that you can get so in tuned with your body, that you don't need a doctor to tell you that your progesterone is probably dropping, and your stress is high.

That's what we do in my clinic, is we want to educate our patients so well, they don't need their doctor for things like colds and flues, and like, "Oh, you've got stress." Things we used to go to our moms and grandmas for. Somehow we fell off the beaten path, when suddenly it was like doctor is gatekeeper of health, and you can never have health without a doctor. I just fully reject that, because the stuff that keeps you out of my office, it's not sexy or anything. But it's the basic stuff of eat right, exercise, wear your blue blocker glasses, keep your stress down, all of those things that we take for granted on a day to day basis. But it's really what you do every day, that has that profound effect. And as I like to say, you can't out supplement a bad lifestyle. You just can't out supplement or out medicate it. And that's why pharmaceuticals don't work a lot of the time, because when you try to strong arm the body, the body's gonna push back, because all your body wants to do is survive, more than anything.

Dave: The fertility awareness method is pretty profound because, in addition to, if you're a woman, you start tracing this, you realize that there are times of the month, not when you're necessarily ovulating or bleeding or anything like that, where your cognitive and mental performance, and your emotions, are not going to be where they are ... You know the days when you're most powerful. You know the days when you're going to be most aroused. And just knowing that, like, "Wow. I wanted to run a marathon today, and it was totally the wrong time, and my score sucked." Or, "I had a really big board meeting today, and I know that I'm completely not where I'm gonna be, so I'm seriously taking some modafinil today. Otherwise, I'm not gonna get the venture funding I wanted." You can account for, and you can counteract periods where you're not gonna be ... See what I just did there? Anyway, periods ... didn't mean to do that. But periods

where you're going to be really at your best, or not at your best, for what you want to be doing that day. And if you know it's coming, and you know that it's normal, then you don't feel like you're weak or crazy, and you're like, "Okay, or maybe I'm just gonna have some extra coffee." Whatever it's gonna take.

Jolene: Yeah.

Dave: It's okay that today I should just get a massage, and chill, and I'm gonna schedule that if I can. That's precious knowledge about, just controlling your biology, and letting it do what it wants to do, so I value that.

Jolene: And to give that permission.

Dave: Yeah. Yeah.

Jolene: I appreciate that you just gave permission. It's okay if you have an extra cup of coffee today. I have women that, the day before they start their period, they're like, "I am flat line fatigued." And yeah. Sure. We're working on this stuff. Can we just acknowledge for a second that natural therapies take months to ... So Vitex is one, for example. Every woman will come in and say, "I tried Vitex for a couple weeks." Eh. It's gonna take-

Dave: What is Vitex?

Jolene: Chaste tree berry. It's something that's used-

Dave: Okay. Yeah, right.

Jolene: It stimulates the LH production in the brain.

Dave: Okay.

Jolene: To help stimulate the ovaries to make progesterone. So, let's just frame it from, let's say you're an executive, and you're gonna go into a stressful meeting, and you know this is happening day seven through ten of your cycle, and you're not sleeping and you're so stressed out. You might actually suppress ovulation that cycle. That might happen. That's okay if that happens, because that's what nature intends. "Oh, the environment's stressful. Don't make a baby." Fantastic. That's very protective. But then you might need a little more progesterone support, because as you get into that luteal phase, if you didn't ovulate, the corpus luteum is pumping out ... The corpus luteum is like, takes its job of making progesterone very seriously, and so it pumps it out like crazy, especially once you get pregnant.

But if that's not there, we're not going to see as much progesterone. If you don't have the progesterone, GABA doesn't stimulate the brain, make you feel chilled out and calm. Now you're flying off the handle. I like to ask women, "Do you, A, want to kill somebody? B, run off to the woods and never be seen? Or C, do all of the above, the week before your period. And so, that's very real, when progesterone gets low. I always

tell women, "You get to say it's your hormones. Your husband doesn't get to say it's your hormones." But let's say you're gonna have that really stressful meeting in that follicular phase, in that early part of your cycle, you can start to tend to your progesterone levels. How can we do that? Vitamin C, Vitex, can be great. Community. Women who spend time around their friends, actually have better progesterone levels. Sex. Maybe you need to have more sex around that day 14, to help get those progesterone. And so, when you can understand your cycle in this way, you can see how one event actually impacted what's going on two weeks from now, and you can really biohack the system, and really get in there and say, "Okay, because of this event, now I'm gonna do X, Y, and Z, so I don't feel like I'm losing my mind the second half of the month." Is that all making sense?

Dave: It's making sense. It's a huge amount of info. And by the way, there will be a transcript for all this. That was a lot of info. So if you go to the Bulletproof website, we have a transcript for all of these episodes, and there's a lot there. One of the other things that I think is worth saying, is that if you get even some of that level of understanding and knowledge, it's oftentimes, especially if you're under 30, there's still some vestiges of grossness, from seventh grade, that we're like, I'm not gonna share this with my partner. Here's the deal, the guy in your life probably wants to know when you're gonna be really horny. And he probably wants to know when you're gonna be super emotional, so he can go out with the guys, or be extra supportive, whatever the heck. But the bottom line is, that just sharing, "Hey. This is going on right now," can really help a relationship. Because then it's like, "Oh. This is just biology. We can manage this." And then also, then I know it's coming to an end. If it's an emotional low energy period, just bring lots of chocolate. It'll be fine. But whatever, right?

Jolene: Yeah.

Dave: I find that open communication there, can really take what looks like crazy behavior, to guys who can have a monthly cycle, but it's so small, it just doesn't really matter for the most part. It can look like crazy behavior, and it's not. And so, you're like, "This is what's going on here." And so, yeah, I'm taking a bath today, and just chill.

Jolene: Yeah.

Dave: It's just healthy relationship management at that point.

Jolene: And we just gotta say, as women, you have to communicate your needs to men. It's just a big slippery slope, right, where we're like, "I need this," but you're not saying that to him. So ladies, you've gotta tell the men. Now, guys who are listening, if it's getting close to the new moon or the full moon, and your lady is starting to get cranky, odds are her period's coming. And this is another thing about the pill, is that you have these arbitrary cycles. But when you're off the pill, as women, we are synced with the rhythms of the earth, and the moon cycles, the ocean cycles. And now we know, even our organs are on biological clocks, and they've got their own cycles. And so this is something I'm like ...

I was just reading this information about how cows all line up with the polarity of the earth. I don't know if you've heard this.

Dave: Yes.

Jolene: Unless they're under power lines. And this has me being like, ladies, get those EMFs out. If the cows are being affected by this, with how they line up on the polarity of the earth, as humans, we are just mammals like the rest of them. If animals are feeling sensitive to this, we're sensitive to this. But it really has me questioning. Nobody stood back and said, "Hey, before we introduce all these EMFs, and bathe all of these people in it, maybe we might just want to ask what's going on here."

Dave: Yeah.

Jolene: So that's just something else, another thing to throw into play.

Dave: Years ago, gee almost twenty years ago, I had coffee in Mountain View, with the guy who holds the first patent on 802.11 Wi-Fi, the very first Wi-Fi. And this is kind of a grizzled engineer, beard, super Silicon Valley engineering type, and he goes, "You know, I took the million-dollar equipment we use for measuring our Wi-Fi things, and I turned it around, and I aimed it at myself, and oh my God, there's all this data coming off the body." And he turns his laptop around, and he goes, "Look. Here's the data that's coming off my body, at least when I was running these signals."

Jolene: Yeah.

Dave: "And, there's diagnostic information in here. This is amazing." And we've known, in little pockets, for a long time, that it's not just about whether we're cooking ourselves or not. And that's why, in Headstrong, I'm like, "Here's the evidence that it destroys mitochondrial function."

Jolene: Yeah.

Dave: It doesn't kill you. It doesn't cook you. It just makes you able to make and use less power, and that affects your hormones, because your mitochondria make your hormones.

Jolene: Yeah.

Dave: So if you're listening to this show, even if you're a little skeptical. Here's the deal. You're not surfing the web when you're asleep. Turn off your Wi-Fi at night. It's that easy.

Jolene: Yeah.

Dave: And you can go deeper than that. We have all the power physically disconnected in our bedroom, with a remote control switch. But you don't have to do that.

Jolene: Yeah.

Dave: So, I love that you said that.

Jolene: Interesting about the mitochondria. If we just frame back, what is the female lineage that gets passed on to baby?

Dave: It's all mitochondria.

Jolene: It's your mitochondria, and your microbiome. And what is the pill hitting? Your mitochondria and your microbiome. How can we think we can build super humans, like a superhuman race, when we've been medicating our women for decades? If we want to ensure that the human race is at the top of the food chain, and survives, and we should all have a vested interest in that, I would argue, then we have to be taking care of our current mothers and our future mothers. These are not only the women who are going to ... Mom is the seed, and the soil, so you're going ...

And this is where reproductive endocrinology gets really short sighted. You don't take heirloom seeds and throw them in any soil, and expect them to grow. Why would we do this with humans as well? But, beyond growing that human, Mom's going to be providing the food for that human, and then she's gonna be the caretaker, the primary caretaker for that baby's life. So, to me, when you go messing with the mitochondria, it's like you're just praying for the extinction of the human race. This is not something we should take lightly or be messing with. And it's something that like, when you hear the research about how antibiotics actually affect the mitochondria, and what you were saying is so interesting, about, the ovaries are rich in mitochondria. Well, why are we seeing more women infertile? Let's just acknowledge that, for decades, we knew that polar bears were having trouble breeding, and that if animals ... So, in animal science, they knew that this BPA filled tanks at the zoo were rendering animals infertile. We knew that before we ever started seeing it in humans. But then, compound the environmental stuff with the fact that, I know me, kid of the 80s. How many antibiotics did I get? Your mitochondria are a bacterial lineage.

Dave: Yes.

Jolene: They're susceptible to these antibiotics. So, ladies and gentlemen, but either way, if you're thinking about getting pregnant, if you ever want to have a baby, you've gotta start loving on your mitochondria, loving on your microbiome, and really, you've gotta be very cautious with using these antibiotics. I mean, hey, there's a time and a place, and I love them when we need them. But the majority of the time, we're using them when we don't need them.

Dave: In fact, in Headstrong, I published a list of medications, a lot of prescription medications, in particular antibiotics-

Jolene: Yeah.

Dave: Cause damage to mitochondria. And look at me, I took antibiotics every month for 15 years, for sinusitis and strep throat, and I, my mitochondria are pretty darn strong now, but they still have issues from that. And they're strong because I managed the crap out of them.

Jolene: Yeah. Right, you do the work. That's what I'm saying, you gotta do the work.

Dave: Yeah. Yeah. You do. Now, speaking of mitochondria, we're running up on the end of the show, but I promised people that we'd talk about your traumatic brain injury.

Jolene: Oh yeah.

Dave: I had one last year that was pretty substantial, so we share that in common. So what happened to your brain?

Jolene: Yeah. So this happened on the Winter Solstice, which is my son's birthday. I feel like, if things happen ... If you're going about life, and you literally get your feet knocked out from you, and you hit your head on the Winter Solstice, you are supposed to wake up to something, so I'm still seeing this as very much a blessing. I took my son to a safe sledding hill, so snow sledding on these giant inner tubes, where you go one at a time, except I forgot about the frontal lobe of teenagers, not being intact, to be able to monitor that hill. So, teenager watching the hill lets someone go right after me. I stand up. I'm only, barely 5'5", so this inner tube hits the back of my knees. My husband sees this. I fly up and over the inner tube, and I land on my right occiput first.

Dave: Oh.

Jolene: Roll down. I'm passed out. I wake up, I'm blind, can't see for like, 10 minutes. All I'm screaming is, "Stabilize C spine." Through all of this ... So, through all of this-

Dave: Such a doctor.

Jolene: It's crazy. I never lost, I never lost the medicine. And it's just, my neurologist is fascinated by this. But I actually ... So the group that we're in, the Facebook group, I was like, I knew JJ, her son, had gone through that traumatic brain injury.

Dave: Yeah.

Jolene: And I was like, she has an entire plethora of people she's brought together that know this. So on the way to the hospital is when I got on Facebook, and I was like, "I need help guys. Call to action to the tribe," because I knew it was gonna go. I was gonna be dark. By the time I got to the hospital, I didn't know my last name. I didn't know any numbers.

Dave: Wow.

Jolene: But when they tried to do a chest x-ray on me, for, they thought my clavicle was fractured, I was like, "You didn't do the orthopedic examination, and actually, I want a

CT, and dah dah dah." And my husband was busting out laughing, because he's like, "You didn't know." They had me in the system from when I was a baby. I was born at this hospital. I didn't know who this person was, that they were talking about. But I knew that I needed, what imaging I needed, and a better muscle relaxer was gonna help me more, and-

Dave: You know why that happened, right?

Jolene: Because my poor little brain was ... Well, you mean in terms of why I didn't lose the medicine?

Dave: Yeah.

Jolene: Because I had to survive.

Dave: Well, it's because you had to survive. It's also because you practiced it so much, that when ... It's the same thing they do in the special forces.

Jolene: Yeah.

Dave: You practice so much, that when you're in the mode where you don't have your prefrontal cortex, because you're in fight or flight mode, you can still default to training.

Jolene: Yeah.

Dave: Right. That's what it is.

Jolene: Well there it is. And I have to say, to your credit, I was ... I don't even know if you remember this. I was debating the progesterone therapy, and you came in online, and you were like, "Do the progesterone therapy."

Dave: Totally.

Jolene: And I did, and this crazy thing. So, for everyone listening, day 21 is about when progesterone spikes in a woman's cycle. We actually tracked this. I was on high dose progesterone therapy. Total game changer. Love that stuff. I was, my brain protocol is like gangbusters, and I've actually been using it in some neurological Lupus patients, who are now walking.

Dave: Yeah.

Jolene: And like, I mean, total gain. So I had to go through this, to test it on myself, to be like, "I'm okay with 30 grams of fish oil, someone taking that every day."

Dave: Yeah.

Jolene: But I did the progesterone therapy, and on day 21, every time on my cycle, I had greater gains, and I woke up more, and what was interesting is that, in my moments when I was awake, I actually had to come back to this. I was writing people messages about this. I don't even remember. I actually got my progesterone dose, by pulling rat studies, because the first human clinical trial had failed. And I pulled rat studies, calculated based on my body weight, and I was like, "This is the prescription I want."

Dave: What we're ... Just for listeners, what we're talking about with progesterone is, it's a new treatment that JJ Virgin talked about quite a bit, in her most recent book, and something that I did after my TBI as well, which is that, as soon as you get hit in the head, you go on high dose progesterone, as an anti-inflammatory. So I literally, as soon as I got hit in the head, I was like, "Lana, give me a progesterone. I was like popping her progesterone pills."

Jolene: Yeah.

Dave: And it's totally a good strategy. You might want to go with a doctor. Oh wait. My wife is a doctor, so great.

Jolene: Yeah. What's interesting is if you start to look at some of the studies that are out there, granted, we definitely need more. But if you're a woman, and you get hit in the head in your follicular phase, so you're on your period, or you're in the first half of your cycle, the next month, you actually recover better. You have less deficits. But, if you're a woman, and they did this in soccer player, you get in the head, because they're always hitting their head on stuff. But don't do that, for the record. This doctor says, "Don't do that."

Dave: Yeah. Stop heading.

Jolene: Stop doing that. But if they were in their luteal phase, because of the drop in progesterone, which naturally happens to trigger a period, they had greater deficits later. And so that was a huge "Aha" for me, of like, well of course. Because what is gonna happen if estrogen is high and unchallenged, you're gonna have more inflammation, but there's gonna be more fluid as well, more water retention. And, for anyone who's gone through a traumatic brain injury, my doctors laughed. Every time they'd go in, with my husband, they'd be like, "Is she screaming at you or hitting you? Has she thrown anything yet?" Because people with traumatic brain injuries have big mood swings. We can see that early. Well, the nice thing about progesterone therapy is it's gonna stimulate GABA, a little stop break on you freaking out, and you're gonna feel a little more chill, a little less anxious, so that's another consideration for it. But yeah. It's funny, because my neurologist thought it was gonna be many months, probably a good four to six months. In the beginning, I couldn't speak full sentences. I couldn't figure out how to structure a sentence, writing it. I still haven't totally remembered some basic definitions. I'm not super worried about that. I'm like, "We can lose second grade for a little bit."

Dave: Oh, I could probably help fix that for you with [crosstalk]-

Jolene: Let's talk about it.

Dave: ... facility that I rented 40 years of Zen, up in Seattle. We do some ... It's not a medical thing. It's personal development. But routinely-

Jolene: Yeah. I will-

Dave: We can see that on a 24 channel.

Jolene: Yeah.

Dave: We see 90% of executives have traumatic brain injury from sometime in their childhood, that's still affecting their behavior, and they don't know it.

Jolene: Yeah.

Dave: And we're like, we'll just show the brain, you can route around that.

Jolene: Yeah.

Dave: But it's fascinating. I had no idea that it's [crosstalk]

Jolene: I'm all into it.

Dave: Oh yeah.

Jolene: Because six months later, and I'm still nauseous, and that's my one thing-

Dave: Oh.

Jolene: That's really hanging on. It feels like I'm in my first trimester pregnancy every day. That one's not so fun. We're still working on that. But the fact that like, I mean, the next thing that happened, after my brain protocol, is after about four weeks, I could only dump like 4,000 word content.

Dave: Wow.

Jolene: My brain is stronger in so many ways. And it was JJ, who was like, you know what Jolene? I don't want you to just heal your brain. I want you to be committed to making it stronger than it was before the injury.

Dave: Yeah.

Jolene: And I was like, "I love this. Let's do this. Let's do all the things."

Dave: Let's compare notes.

Jolene: Yeah.

Dave: I want you to tell me what you recommend someone do the first 24 hours after they get hit in the head, and I'll tell you what I did the first 24 hours after I got hit in the head. So you go first.

Jolene: Okay. So, once brain bleed has been ruled out, we hit the Ginkgo, we go high dose fish oil.

Dave: It's ruled out by x-ray.

Jolene: Yeah. Or imaging.

Dave: MRI. Okay. MRI.

Jolene: Yeah. CT or MRI.

Dave: Okay.

Jolene: What's interesting is that, they start with MRI, but there's been some studies to show that 30% of people that repeat with a CT, there's actually issues in the brain that weren't caught the first time.

Dave: Okay.

Jolene: So, to me, it's important that we should actually measure people more than once. So, fish oil, I went to 30 grams. I mean, I choked down 30 grams as soon as I could. Of course, you want to have a doctor supervising this. For me, I'm like, "Hey, if I start bruising, I went a little bit too high." But if you look at the research, it's not very good in terms of the claims that fish oil will make you bleed out. There's actually, the evidence isn't so good that that'll happen. GPC, so doing the phosphatidylcholine, phosphatidyl serene, that I definitely got into play right away. Turmeric, oh my gosh.

Dave: Yep.

Jolene: And then I went keto, right away. And I'm like-

Dave: That was so smart.

Jolene: So, fasting is definitely non-negotiable. I would want to see a 24 hour fast, but I really say, give yourself two to three days. I think there's a wisdom, that I'm nauseous, and about every other week, I can't eat for two to three days. I can drink coffee, so I drink my Bulletproof coffee. Oh my, your Brain Octane is gangbusters, by the way. I'm just like-

Dave: Thank you.

Jolene: And if you're feeling fine, and you take that, you don't ... You're like, "I notice a little bit of difference." If you're not feeling fine, that's really the profound effect, so that was like, once I experienced that, I do what's called upgraded golden milk, where I'm doing the Brain Octane and that, and doing ghee, and doing all of that, with turmeric.

Dave: Yep.

Jolene: But I definitely am in a fam ... You know, coffee is actually going to ... So, if you're ... So, you know, I came from a nutrition background, and we were like, "Never ever, ever have coffee on an empty stomach, and keto's bad."

Dave: Yeah.

Jolene: I laugh about what I was taught 20 years ago. So, coffee actually ... It's interesting, because I went through, now I fast, two to three days, every couple of weeks, and my body actually craves coffee first thing in the morning. I actually had the ... I was just listening to ... I was at a seminar, with Dr. Perlmutter, who was saying-

Dave: I love him. Yeah. Good friend.

Jolene: Yeah. Ketones go high in the morning. Then you hit the coffee. Ketones go even higher.

Dave: Yeah.

Jolene: Makes sense right? My brain didn't ... I got really nauseous in the morning, didn't want me to eat. What could I tolerate? High fat, and like, four cups of coffee people. So, let me just out myself with that. Coffee is totally what I'm leveraging, to help my brain. It's so amazing.

Dave: There's a study, that says caffeine in the morning, about as much as in two small cup of coffee, doubles ketone production, which is totally unknown, but it's a real study, and you're like, "Wow."

Jolene: Yeah.

Dave: Okay, so you hit ketones, you hit fish oil, and you hit progesterone, for your brain injury.

Jolene: Progesterone. All the amino acids.

Dave: And Ginkgo.

Jolene: Ginkgo, turmeric, and high antioxidants. I also did HBOT therapy, hyperbaric oxygen therapy, and then I had this whole cocktail of antioxidants, and mitochondrial. I use a mitochondrial product, so I was like, big time mitochondrial support, glutathione.

Dave: Yep.

Jolene: I mean, everything for that. And then I would do that about an hour and a half, two hours before the HBOT, and then I would do it again afterwards.

Dave: Sure.

Jolene: And I did that twice a day for several months. And I also made the goal, and people think I'm crazy for this, but I meditated for about four hours every day, and I really committed to that. And when you talk about the things that are in the subconscious, and the things that come up in your lineage, and all that. Never has there been a bigger blessing than for me to go into my subconscious, and literally uproot what was planted from my parents, what was planted from other people, what I'd picked up in society. I've been remodeling my brain in such a phenomenal way, and I'm like, "Thank you for the head injury." Because, would I have invested to do this? No. But not being able to walk for several months. I couldn't drive. I couldn't drive for about three months. I just started night driving. When you have something humbling like that go on, and then you're like, I have to do something. I had to get hit in the head.

Dave: Yeah.

Jolene: I had to get hit in the head, and now I'm convinced that what I'm coming out of with this, and what ... Everybody's like, Dr. Brighten, we need you to do a talk about post birth control syndrome, something that I've been working on in my clinic for years, and I'm convinced that all of this is coming full circle to my mission, and the work that I'm here to do on this planet. So I see my brain injury as a blessing, as crazy as it is, but I really am learning a tremendous amount.

Dave: Yeah. They can teach you a lot.

Jolene: Totally.

Dave: For sure.

Jolene: All right, so your turn. First 24 hours.

Dave: I took a titanium knee to the head, flying through the air.

Jolene: Was that at burning man?

Dave: It was at burning man. That's just what you do at burning man.

Jolene: Was that JJ's knee?

Dave: I'm not really sure whose knee it was. My memory is impaired. And so I ... It was a big arena. Anyway, it was in the Thunderdome, at burning man.

Jolene: Okay, so you should probably have expected to walk out with at least a mild concussion. You're in the Thunderdome.

Dave: We were using foam bats. It was all in good fun. It was actually hilarious. And it was just an accidental thing. And it was within a minute of this, I'm like, "Okay, I can't handle the blinky bright lights that are all over the place."

Jolene: Oh, yeah.

Dave: I'm nauseous. I need to lay down. You guys need to take me back to the RV. And thankfully we had the art car, which is a giant stick of butter, with a cup of coffee spinning around on top. So, I'm lying on the hood of it, and they're using it as an ambulance. And I went back, and because I was camping with masses of health people, I was like, "Everyone, give me all of your fish oil."

Jolene: Yeah.

Dave: And I didn't know if I was bleeding or not, but I'm like, "I don't really care. I'm just gonna do this."

Jolene: You know, where you were at, if you had a brain bleed ...

Dave: It was a risk, right? And I also, I took 10 Keto Primes, which is a Bulletproof thing, and this is a mitochondrial support. Whenever your mitochondria have problems, they run out of this rare ketone. It's different than the ketone we talk about, so I just took 10 of those, and I kept taking them. I don't know how many I took, a lot. Because I just wanted to have maximum energy sufficiency, because the first thing that happens in the first 24 to 72 hours, is you get this swelling, and you get mitochondrial death.

Jolene: Yep.

Dave: And I'm like, "You guys don't need to die, so like, hang out here."

Jolene: Yeah.

Dave: I took a lot of Brain Octane, as much as I could take, in the form of Bulletproof coffee. I used a metal filter when I brewed the coffee. I used a metal filter, when I brewed the coffee. And the reason is that there's two studies that show coffee oils are anti-inflammatory in the brain. That's why I still, to this day, say use a metal filter, not a paper filter, if you're drinking coffee that doesn't have mold in it.

Jolene: Snap.

Dave: Paper filters might be good for moldy coffee.

Jolene: I've got a Chemex. I'm like, I gotta get that inflammation [crosstalk 01:21:56].

Dave: Oh, just get a Abel filter. They're A-B, I think A-B-E-L or A-B-L-E. It's a metal filter that fits in your Chemex. It makes better tasting coffee, and it gets you the oils from the coffee. In some people they raise cholesterol, but they turn off inflammation while raising

cholesterol. Oh, you live longer with higher cholesterol than inflammation. I guess that's not a problem.

Jolene: Oh, I swear I'm the only doctor that's telling people, "I need your cholesterol higher. You need to make hormones. I need your cholesterol higher. Your brain doesn't like this."

Dave: As long as your inflammation's down, I would support that.

Jolene: Exactly. Because at the end of the day, who's the ... Yeah.

Dave: Right. And so I did that, just to finish that for listeners who are like, "What do I do?" So, ketosis from Brain Octane oil, really important, because ketones, if you listen to the interview with Dr. Veech, on Bulletproof Radio, we talk a lot about inflammation, and why that's important. And then, I started on progesterone right away, because fortunately, Lana's on progesterone. I'm just like, "Give me some cream. Give me some pills. I'm just gonna do this." Let's see, I didn't use testosterone, which I normally ... I normally use testosterone. I've been really open about that for years. I've gone on and off of it, but I take a biological identical dose, so that I just have like, medium, around 50th percentile, which is where I want to be. And so I stopped doing that, because that actually is contraindicated with a brain injury like that.

And I still was pretty rocked by this, and about three weeks later, I went and I did ... I looked at my brain. And I actually, I'll publish this, because I have my 24 channel EEG stuff, from 40 years of Zen, and I have a zen brain. I've done four months of intense neuro feedback with personal development, where my symmetry is ... You look at a map of asymmetry in my brain, there's nothing there, because everything is symmetrical, and it runs well. And it looks like spaghetti. There's all these lines everywhere, on a representation of the brain, because I was no longer symmetrical. I was in asynchrony. So it took about two days of really focused feedback to get my brain back to where it had been before. And I think, without that, it would've taken many hours of meditation a day. And I'm fortunate. Okay, this isn't what we do at 40 years of Zen. This is a personal development process. But I happen to have neuroscientists who I work with on a regular basis, so we took the clinical grade gear, and we used it clinically.

Jolene: Yeah.

Dave: Instead of for personal development. But without that, there were definitely some personality sort of changes. I was more angry.

Jolene: Yeah.

Dave: I sent a few angry emails to people, where's I had perceived that they had offended me, or something like ... There was one guy, another health influencer, who had kind of done something that, at the time, I perceived as underhanded, where it's like, "Look. I've helped you a lot. Why are you trying to throw my stuff under the bus here? Like, that's not cool."

Jolene: Yeah.

Dave: But, I was much quicker to anger, than I normally would be, and more likely to be like, "You know what? Here's my middle finger."

Jolene: Yeah.

Dave: And in my normal, I'm not like that, in my normal life. I don't swear, and I swore quite a lot for a little while. And I'm just like, I'm even and I'm kind, and I was just a little bit more aggressive.

Jolene: Oh totally.

Dave: Certainly, my kids and wife noticed that. And lack of sound.

Jolene: Yeah. Inflammation on the brain does that.

Dave: The other thing though, that I think is really important, is noise canceling headphones. I used those a lot, just the first couple days, just to allow the noise in the brain to come down. And this is, I showed those glasses earlier in the interview, the True Dark glasses.

Jolene: Yes.

Dave: The noise canceling headphones for your eyes, basically. And that was ridiculous. What happens when you, instead of using blue blockers, you use the full on dark, block everything that affect mitochondria. The mitochondria talk to each other with light. When you block all of the light, all of the spectrum of light that interferes with their ability to talk via light, I think that there's really good use for that. And during brain recovery, they use different colored lenses, so I'm like, "Hey, I'm just gonna try this." And certainly I felt calmer, because I felt like I was in a dark room, even though I wasn't.

Jolene: Yeah.

Dave: So that seemed to matter for me.

Jolene: Yeah. Well, and that was a ... I mean, I had to just walk around with amber glasses, all the time.

Dave: Okay.

Jolene: And then, definitely in the dark room or in the dark HBOT as often as possible.

Dave: Yeah.

Jolene: For those reasons. You know, something you brought up. In the first 24 hours, inflammation goes up in the brain. We also develop leaky gut, and we actually see in the animal studies, because they can't dissect humans, that when there is brain trauma,

that not only is there intestinal hyperpermeability, but you also start breaking off cells. So the microvilli start just sloughing off. So your gut is just giving up.

Dave: Really?

Jolene: Yes. So you cannot just L-glutamine your way out of that. Plus, L-glutamine can be a little too excitatory around the brain.

Dave: Yeah. We shouldn't take L-glutamine right after brain injury.

Jolene: Yeah. Not advisable. But it's something that it's really important if we sit back and we ... And I'm doing a lot of reframe, since this has happened, of people who are not recovering their gut. I treat a lot of small intestinal bacterial overgrowth. I'm always doing vagal nerve stimulation with these people, because the crux of this is that we've got a nervous system dysregulation. There's issues with how the gut's actually moving. The bacteria in the wrong place, we've gotta corral them, put them in the right place, and kill some of them. But all things being said, there's a motility issue there, so it's really giving me a reframe, and asking people, "Have you been hit in the head, even mildly." And looking at, if you don't heal your brain, if you're not actively healing your brain after that, then we can't expect that your gut can be healed.

Dave: Yeah.

Jolene: And what's really interesting is that you're ... So, you've gotta wear the glasses. You've gotta wear the noise canceling, definitely. I couldn't listen to music for four months, because you don't even realize what's going on in the background. As babies, we are developing just how to put everything on autopilot. You are just processing so much stuff. But if you don't actively heal that brain, your brain actually loses the ability to know where your gut is in space. So your brain won't even know how to communicate to your gut correctly, because it's not sure where it's at. I just want to add in that piece, because this is another way where keto can help so much, because you are delivering the high fat that's gonna help the brain. It's gonna help inflammation. It's what the bacteria in your small intestine would prefer, instead of high boluses of carbohydrates. But there's a lot of things to heal the brain, that you have to do those if you're going to heal your gut. It's not going to be just L-glutamine, and do an auto immune paleo diet, or something like that. No. There's a neurological component to all of this.

Dave: There is. And you just reminded me of three other things I did, that are worth mentioning.

Jolene: Totally. I love this. I am eating this all up right now.

Dave: I also pounded 10 Unfair Advantages a day. It's another mitochondrial stimulant, that's an activated form of highly absorbable PQQ, bound to CoQ10. I feel that normally. I take it and I'm like, "Whoa. Things are working again."

Jolene: Yeah.

Dave: So I took a lot of that on a daily basis. But right after the injury, I like, just opening ampules and swallowing as many as I had on me.

Then, I used facial ice baths, or cryotherapy, for the vagal nerve thing.

Jolene: Yeah.

Dave: And I used a cold laser on my head, over the site of the injury, which is incredibly powerful to do that. So those are things I ... Oh, and hyperbaric. I also have my own hyperbaric chamber, here at Bulletproof Labs, which is convenient. I'm like, "Oh, I'll get home and hop in hyperbaric."

Jolene: Yeah.

Dave: So yeah. You and I are unusual, because you're in functional medicine, and because I'm a biohacker. But if you're as bad as you were, where you can't talk and all that stuff, you want the stuff that JJ's written about, and stuff that you've written about.

Jolene: Yeah.

Dave: And things like that. And just, anything on earth that will support your mitochondria, and I think ketosis is well supported. I also would say, and this will annoy people. If using Brain Octane, you can get some ketones. It automatically converts its exogenous ketones. There is an argument for a small amount of sugar after the brain injury, just because you want to get the energy to the mitochondria. They are dying, literally dying for energy. I don't have any problem with having ketones and sugar at the same time, post brain injury. I'm not saying drink a Coke. I'm just saying that a little bit of sugar could go a long way, just towards keeping you from getting hypoglycemia.

Jolene: Yeah.

Dave: Which is not a good thing at the time. Awesome.

Jolene: To your point on the cryotherapy, it happened to snow in Portland. It was like the coldest, snowiest Portland. So I actually would go outside, and I would just bundle up my whole body, and just lay my head in the snow for like, 20 minutes.

Dave: That's right. Yeah.

Jolene: And then every time I could go outside and sit, for at least 20 minutes, and just leave my head exposed. And definitely, the cold laser therapy, definitely use that. Infrared lights. Everything you've said, I totally back that up as well.

Dave: Nice. Awesome. Well we are on a pretty long episode of Bulletproof Radio here, which is cool, because we're talking about basically three different topics. What about mommy brain? What about birth control? And what about hitting yourself in the head? But we fit it all in, but you haven't answered the final question.

Jolene: Oh, the final question.

Dave: For Bulletproof Radio, which is, if someone came to you tomorrow, and based on everything you've lived through, and been through, and done, and all of that, so not just your medical stuff. If someone came and said, "I want to perform better at everything I do, better at being a human being. What are the three most important pieces of advice you have for me?" What would you tell them?

Jolene: Oh my gosh. Definitely, if you want to be a better human being, then you need to be very present. You need to practice mindfulness, and when things get uncomfortable, you need to explore that. Go deep down and understand why. I think that would be my very first thing. All animals want to avoid pain, but as humans, we have pills now, and I think we've over medicated an entire society from being able to have their wherewithal about that. So I think if you want to be a better person, you first need to get a really clean mirror, and start taking a look at all of that.

I definitely think you've gotta love your microbiome, because, like you were introducing, if you don't have the right gut bacteria ... I mean, we've known for a long time, not only can gut bacteria influence your mood, but there's viruses that can get into your brain, and they can control your moods. So if you're not taking care of your microbiome and your inflammation, forget it.

And the third thing is I would say, you can't go wrong, I mean, with everything we've talked about today, you can't go wrong with loving your mitochondria, right? Because if you've got the energy to show up. If you've got energy at the cellular level, then you've got the energy to show up as a whole person, and fully yourself, every single day, and to do that big work, whatever you were put here for. And what you're doing to take care of your mitochondria just so happens to be all of the things that send the body that the signal's safe. So back full circle to what we were talking about, if the body's safe, now we can do that higher level work. Now we can start to transcend into the mind body aspect, and even the spiritual aspect, right back to is this mine? Is this someone else's? Do I need to heal my family lineage?

That would be my three. Those would be my three big ones.

Dave: Beautiful. Well, thanks Dr. Jolene Brighten. Where can people find out more info about you?

Jolene: Yeah. You can find me at DrBrighten.com. That's D-R B-R-I-G-H-T-E-N, so a little tricky, like brighten like the sun. If you're listening to this, and you're like, I need help with post birth control syndrome right away, so to my website. I gotcha there. We'll get you into a detox. If you feel better from there, you might not need a doctor. If you don't that information is really helpful to take to a doctor as well.

And of course, I'm on Facebook. You can always catch me there.

Dave: Beautiful. Well, thanks Jolene. It's always a pleasure to get to chat, and I'm sure we'll chat again soon at one of JJ's events.

Jolene: Yeah.

Dave: Have a beautiful day.

Jolene: You too. Thank you again.

Dave: If you liked today's episode, you know what to do. Head on over to iTunes and tell people that it's good, by leaving a five star review. And while you're at it, since you're in the gratitude mindset of saying thanks, you might as well go to Amazon, go to the Headstrong page, and if you bought the book and you read it, and you liked it, leave a five star review. Reviews on Amazon are amazing. We just hit the New York Times list for the second time, this time in the science section of the monthly best sellers. And anything that you do there, I will see personally. I read all of my reviews there, so I really appreciate if you take the time to do that.