

EPISODE 175

[INTRODUCTION]

[0:00:11.6] AVH: Alright folks, correct me if I'm wrong but I think everyone knows what Bulletproof coffee is and pretty much everybody knows the guy who created it. Dave Asprey who is also one of the most prominent bio hackers in the world and the man who's gunning to live to be 180 by hacking every element of his health. From the food he eats, to the way he sleeps and breathes and works out and recovers and more.

While some of his tactics are very paleo – like eating quality whole foods, sleeping in a cool, dark room and you know, the whole coffee thing. Some of his methods are about as opposite from traditional paleo as you can imagine. For example, Dave takes upwards of a 150 pills, vitamins and supplements every single day. As we get into the podcast, he's a proponent of the "Try anything and everything all at once" theory in terms of hacking or improving whatever element of your health you're looking to upgrade.

Anyway, whether you're into bio hacking or not, one thing we can say is that Dave Asprey is certainly putting in the time, money and effort into trying this stuff for us that we can pick and choose the strategies we want to implement in our own lives. Whether it's cold showers or light therapy or fasting or anything else.

He does make a mean cup of coffee. We get in to all of that and more, including what happens when his kids go through the McDonalds Drive through which is a pretty good story.

I hope you enjoy this interview but before we start, I want to mention some really exciting news on the Paleo Magazine front that I hope you've already heard about on social media.

Paleo Magazine is proud to present the first annual paleo expo, it's coming in late august, early September 2018. It's going to be in the Denver area and this expo is a two day event dedicated to connecting the paleo community – which I know we love to do because we all love to hang out.

Tickets are just \$50 and an excess of 10,000 people are expected to show up. We've got more details to come as we get closer to the date but we just had to tell you because we're so excited that this is happening and we really hope that you join us and come and hang out.

For more information on exhibiting, you can email exhibitor@thepaleoexpo.com and for more information, just on attending, you can visit thepaleoexpo.com or reach out to us on social media @paleomagazine. That's it, alright, on to the interview.

[INTERVIEW]

[0:03:05.0] AVH: Dave, welcome back to the podcast, thanks for being here.

[0:03:08.2] DA: I love being here, it is my honor to be here for you today.

[0:03:11.4] AVH: Awesome. Unfortunately, I wasn't able to introduce myself at Paleo FX this past May but I was able to hear your talk. I'm not sure if you had much time to really chat with people or see much of the show but I would love to hear, you know, if you have any thoughts from the event or just kind of on the state of paleo right now in general. I got to get that out since this is the Paleo Magazine radio podcast.

[0:03:35.1] DA: I remember years ago, I was on Paleo Hacks and I was talking about bio hacking and some paleo hardcore guy, no one we've heard of just like a commenter, was saying you know, "Well, this bio hacking thing is a fad or something" and I said, "Look, Cave men didn't have mass spectrometers, cavemen didn't have lasers and all of the other tools of science that we have today. So I hate to tell you but my army of bio hackers is coming with lasers to take the cave."

[0:04:05.7] AVH: Oh no.

[0:04:07.8] DA: Well, I kind of think I saw some panels on bio hacking at Paleo FX, hallelujah.

[0:04:13.7] AVH: Absolutely.

[0:04:14.5] DA: The worlds are coming together because what's really going on here is it's not just about ancestral stuff, what's going on here is the definition of bio hacking that I wrote, which is "The art and science of changing the environment around you and inside of you that you have full control of your own biology."

Paleo is about, "What is the baseline environment that we evolved to be in" and then bio hacking is how do we consciously change that environment so that our bodies will do what they want which isn't necessarily – our body is what we want which isn't necessarily what they want.

Our bodies want us to reproduce and then die to get out of the way for the next generation. That's not in my best interest so I'm going to change the environment so I won't die.

[0:04:55.2] AVH: Right, got it. I guess that kind of answers my next question which was why you think the bullet proof community and the paleo community have so much overlap because you know, as you said, the paleo community is really interested, we're both interested in health. But you know, on one end of the spectrum about this kind of stripped down diet and lifestyle and ancestral health thing.

You're on the other hand, as you said with your lasers and your bio hacking, what about – I mean, there is a part I think of the paleo community that's kind of resistant to as you said, kind of taking the healthy paleo baseline and then changing it to optimize our health.

I think there are some people that might rebel against that saying "Well we don't need that, if we're doing things, the healthy ancestral way that our bodies are supposed to, that's all we need." Right? Yeah.

[0:05:44.4] DA: I mean, it's a wonderful fantasy, the only problem is that if you are going to eat the way our ancestors ate, you should also expose yourself to toxins the way our ancestors did. Our ancestors were only exposed to mother nature's toxins which themselves will screw you up pretty well if you see my documentary on toxic mold and what that does.

The problem is that, you are a wash in bad light and electromagnetic frequencies and xeno estrogens, both manmade and nature made. And a whole bunch of other things including vegetables that were grown in depleted soil. Species that didn't exist when we were cavemen.

You're completely living a fantasy world, if you think that the amount of mercury in your fish today is the same as it was for someone 2,000 or 10,000 or 100,000 years ago. It's not like that. We have a much bigger biological load from toxins than we ever did as cavemen.

Why do you think that food is going to be enough to fix that? It's not, in fact, even in cavemen times, food was enough to make sure that you reproduced but it wasn't there to keep you focused and strong and youthful well into your hundreds. No.

[0:07:00.5] AVH: Right.

[0:07:01.3] DA: That's not how it works and if your goal is to die like a caveman then you should eat like a caveman. I think you could do better.

[0:07:08.1] AVH: Right, we have a whole new set of dangers in this age that our cavemen ancestors didn't have to deal with, absolutely.

[0:07:17.1] DA: Like podcast and Facebook and stuff.

[0:07:18.8] AVH: Yeah, which are yeah, pretty vicious in their own right. That brings me to your book. Unless our listeners have been actually living in a cave, they already know about *Headstrong* where you talk about how to upgrade your mental health and performance in terms of fighting inflammation, finding the best fuel, the best supplements, sleep and breathing hacks. There's so much to kind of unpack in this book but I really want to try and ask some questions, that I haven't heard asked of you before that we can tie back to the book. Because I think ultimately, all of these questions are about finding how to be the healthiest and most high functioning version of yourself right?

The first question I have is about where you live. You're American but you live in Canada right?

[0:08:04.4] DA: Right.

[0:08:05.7] AVH: You live in BC. I actually am Canadian as well, I go between the US and Ottawa right now.

[0:08:11.7] DA: They'll be jealous.

[0:08:13.2] AVH: Yeah, I know. But BC is beautiful but it's not the sunniest place right? Maybe this is subjective, this is just me putting my opinion on it, but it's not the best weather in the world necessarily. I guess, my question is a two-parter. Why do you live in BC? Part two of that question is, if money and convenience was of no obstacle, what do you think is the ultimate, healthiest, best place in the world to live?

[0:08:39.4] DA: Well, there's a lot of variables in that question. I will tell you that right where I live is the sunniest part in all of Canada.

[0:08:48.1] AVH: Yeah, you found it. You found that one spot, that actually has sunshine.

[0:08:53.0] DA: The community next door to us is where – if you're from Canada, when you retire, you either move here or you move to Phoenix or the Prom Desert or Las Vegas. Canadians, we have to get sun, we've lived in this dark place forever. There's a couple of answers. One is, I travel 125 days a year. Right now, it is fantastically sunny and beautiful and it will be light till 11:00 at night.

I'm in a position where in winter, when it's grey and crappy. Number one, I have a tanning lamp, number two, I just go to a sunny place for a month or six weeks and bring my family with me and then I work remotely for a little while during the worst part of the year.

I don't actually think it's wise to be living in Canada full time in the winter, it's bad for you.

[0:09:43.4] AVH: I would agree with that because living in Ottawa where it's like minus 40 Celsius for three months of the year – I can attest that that's not the healthiest situation.

[0:09:52.8] DA: I love Canada. One of the reasons I live here is that the community is intact and if you look at what's in *Headstrong* – *Headstrong* is really about mitochondria in your body and mitochondria are ancient bacteria that still follow bacteria rules.

You want to talk about ancestral eating? The ancestor of every mammal, everything that moves, essentially every animal on the planet is these little red bacteria that used to float in the ocean about two billion years ago. They are their own biome inside your body.

Just like you have a gut biome, you have a mitochondrial biome. They listen to the environment around you, when you look at the effects of living far north of the equator, not just in Canada but in northern Europe as well.

Especially if you have darker skin but even if you're completely pale – which is an adaptation to be able to live further away from the equator – what you are going to find is that well, the rate of every neurological degenerative disease is much higher when you get further from the equator.

Autism's worse, MS is worse, Alzheimer's worse, all those things. It doesn't mean that we can't adapt ourselves to this. I mean, we are on the cusp of becoming a space ferrying species, probably in my lifetime.

[0:11:14.2] AVH: Yeah, in your lifetime, none of our lifetimes but your lifetime maybe.

[0:11:17.1] DA: Yours two actually. It's amazing but like one of the investors in Bulletproof is Naveen Jane who is running Viome. One of the most exciting health monitoring companies but he's also running Moon Express like we have robots mining Mars this year.

Sorry, not Mars – robots mining the moon this year for minerals. So, if we're going to successfully move to other planets or just learn how to live in orbit, there's a lot we don't know about our mitochondria about what environment makes us strongest and bio hacking is all about that.

Let's find the paleo template for what our biology expects and let's learn how to replicate that fully. Let's learn how to make it better so that we can be stronger or faster or live longer or have better sex or do whatever you want.

If your goal is look, "I just want to get swoll." Fine, you're a bio hacker, use all of the tools to get swoll. I just want energy to play with my kids after I'm home from a long day at work and just not be tired and cranky, fine, you're a parent. Be a parent. That's the kind of power I'm talking about.

[0:12:22.3] AVH: That leads me to another good question here about bio hacking specifically. Your story is when you started out, you started out this journey and pretty poor health, with some unhealthy lifestyle factors.

You obviously switched over to dedicating your life to hacking health but what about this next generation who have access to this information that you're giving us sooner and want to start sooner. What about bio hacking for children? Teenagers themselves who are getting into it or what about you have children, young kids, how early do you start? What kinds of things do you focus on, what's appropriate when we're talking about bio hacking for kids?

[0:13:01.0] DA: It's funny. A lot of my knowledge is informed by 20 years of running and anti-aging nonprofit research and education group in Silicon Valley. In my very first book was the first hands on book for something called Epigenetics. Epigenetics is the science of how has the environment around us changed in expression.

That book is called *The Better Baby Book*. It was published by Wiley, sometime around like 2011. This is where you have the most leverage is three months before you get pregnant. That's when mom and dad can do the most by reducing the toxins, eating the right kinds of fats, getting your biology in order because your mitochondria are monitoring the environment all the time and guess what part of you picks what egg drops?

[0:13:51.0] AVH: Mitochondria.

[0:13:52.1] DA: Your mitochondria pick which egg drops. This is why the ovaries in women have 100,000 mitochondria per cell and our brains only have 15,000 mitochondria per cell and our eyes and our heart and the rest of us have 2,000 or less.

[0:14:03.8] AVH: Wow.

[0:14:05.9] DA: What's going on there is this delicate environmental sensors that determine what genes get expressed by our nuclear DNA, they are these ancient bacteria. They're still doing what bacteria want and what they want is for the petri dish that's us to be alive and to reproduce effectively.

What you do is, you set yourself up for success. We didn't know a lot of things back when I wrote that book but my wife who is a medical doctor from the Carolina institute, she was infertile when I met her. We end up having two kids, one was when she was 39, one was when she was 42 with no IVF or fertility assistance and things like that.

I reversed her PCOS and we had kids without autism even though Aspergers syndrome runs in my family and I have all the symptoms of it till my mid-20's. I am grateful for this kind of knowledge but that's where we have the most leverage is actually before pregnancy and then first trimester. You could do so much then and you actually have declining power every day from then until you die.

You owe it to your kids to start hacking in the womb and to never stop.

[0:15:11.9] AVH: Wow, okay. That just opened up a whole new world. I'm thinking like, "Well what about your kids that are in elementary school, what are you doing for them." But I mean, you're talking like family planning here. Before they're even a twinkle in the eye, you should be working on that.

[0:15:28.1] DA: Actually, if you look at what's influencing your own status, your longevity, it's what your grandmother ate. It's one of the biggest things that makes a difference. Your grandmother and your mother, their diet, their environment programmed your biology.

This is a multi-generational problem. What we did for our kids before they were conceived while they were in the womb and what we're doing for them right now is going to affect my grandkids greatly.

[0:15:55.6] AVH: Once again, it looks like the lion's share of the responsibility is on the woman, is that right?

[0:16:02.5] DA: Not at all.

[0:16:03.0] AVH: No?

[0:16:04.1] DA: No.

[0:16:04.9] AVH: Okay, that's good. You're saying that it's women, you know, obviously we're the ones carrying the children so we have to really be conscious of what we're eating and what we're doing. What about the men and their nutrition and health in terms of procreation?

[0:16:19.7] DA: Well, it turns out, and this is something we covered in *The Better Baby Book*. If you are drinking alcohol before conception, the odds of problems with the kid go up pretty dramatically. If you're smoking, if you're eating bad fats and if you're setting up your own body to be weaker – you have a very substantial changes in the risk profile for your children. Even older fathers have a much higher chance of having children with neurological deficits.

That's not to say you can't counteract those problems, you can. But that means that dad has to get rid of the toxins, dad has to eat the right food and once that impregnation event happens, then what has a big influence there is, does mom feel safe? Does she feel cared for? That's something that is a community responsibility but it falls especially in modern society, in large part on dad.

Mom needs to cultivate friendships and a community but the father needs to be there and support the mom. Because look, if there's a voice in the back of mom's head that says, you know, "I don't know if we have enough, I don't know if I'm safe, I don't know if he's going to be here. He's drinking, he's yelling at me." Or whatever those family situation is.

They can be much worse than that, “He’s in jail, he’s beating me.” Whatever, “I don’t know who he is”, all those things do happen. They create a deep sense of uncertainty at a time when we’re biologically wired to be nesting and to be building a safe environment. That level of background stress, it is picked up by the baby in the womb.

It effects personality outcomes for the baby, it effects genetic expression for the baby because it is keenly listening to the world around it with its little mitochondria working to determine, ‘Do I need to come out of here ready to fight or do I need to come out of here ready to grow?’

It’s our job as parents to set the mother up and the baby up so that the baby gets a signal that says, “You know what? This is a land of abundance and plenty with all the raw materials needed to grow and be strong so that I can allocate resources towards intelligence, towards longevity, towards resilience instead of towards quick survival, just be ready to run, be ready to fight the tigers, be ready to have another baby and die and get out of the way.”

We will express our genes one way or the other and it’s really important that we show our children environmentally that you know what? Now is the time to not worry, not be stressed and to actually grow and build new neurological pathways and put more resources towards the brain.

[0:19:08.7] AVH: Got it, okay. It’s safe to say then that there is no wrong time to start improving your health and improving the health of your mitochondria but perhaps that sort of every year that passes, you’re losing out on opportunity to increase your longevity right?

If you were starting this when you’re 50 versus if you had parents that were taking care of stuff when you were in the womb – you’re obviously setup for success more in the latter situation right?

[0:19:37.9] DA: You are. In *Headstrong*, I write about this quite a bit. You can do a lot of things now and there’s some stuff that cavemen couldn’t do like stem cell treatments and things. We’re on the cusp of mitochondrial therapies where you’ll be able to actually change the genetics of your own mitochondria and things like that that are just almost unimaginably powerful.

But yeah, right now, it's never too late to get started and the research in *Headstrong* shows that half of people, it's actually 48%, under age 40 have early onset mitochondrial dysfunction. That means that the habitat that supports your mitochondrial biome is dysfunctional so you have mitochondrial dysbiosis basically.

[0:20:22.5] AVH: Right.

[0:20:23.4] DA: That's not good. Half of us and over age 40, everyone has mitochondrial dysfunction, they just don't call it early onset, they call it aging. My belief, based on all the research from antiaging and all these other things is that you don't have to have old person mitochondrial function when you're old. If you understand that it's a system that's mostly understood, there's still some things worth figuring out and there always will be. But you can take control of that system and make it more effective and efficient than it would otherwise have been.

The dividends are, you feel really good, now, your brain works, you reduce your likelihood of every disease – because all diseases eventually come down to mitochondria – and you'll probably live longer. But you'll feel really good right now and you have more energy and you'll actually be a nicer person. Because people who have enough energy, are wired to be nice to each other.

People without enough energy are wired to be mean to each other.

[0:21:20.0] AVH: Okay, last question about kids before we move on because I just find this part really interesting. Your two kids, are they doing some of these stuff with you? Are they taking any kinds of cool sort of vitamins or supplements or trying any of this light therapy? Do they think it's lame because dad's doing it or are they super into it or what?

[0:21:37.8] DA: My kids are seven and 10. This is still the era where your parents know everything.

[0:21:43.2] AVH: Got it.

[0:21:44.0] DA: I still have about two to three more years before I become lame, I'm really looking forward to having to embarrass my children, I don't quite have that yet.

[0:21:52.3] AVH: Something to look forward to.

[0:21:53.6] DA: Exactly. Right now, They actually say "Dad, what's McDonald's?" "It's a restaurant, they put a lot of chemicals in their food, they use the wrong fats and I don't eat that stuff and it's not good for you and when you eat there, you don't feel good."

Our housekeeper and I'm ashamed to say was driving with the kids somewhere and she decided to go to McDonalds to get a cup of coffee. I'm ashamed to say this because we have the best coffee on earth, I run Bulletproof for God's sake. Lab tested all that stuff but she's like, "I needed coffee now, not when I get to your house." She pulls up with the kids in the car and rolls down the window and the kids are like –

You can talk to a screen and they'll give you food. She orders, you know, like a cup of coffee or whatever and my daughter rolls down the window and says, "I would like a poopy chemical latte please." And when you're five or six or whatever she was at the time – poopy is like the worst thing you can ever be.

[0:22:50.5] AVH: Yeah.

[0:22:53.3] DA: They're giggling but our housekeeper was actually a little bit upset by this. She's like well you know. So I was like Alright kids, here's the deal. McDonalds tastes good and there's lots of other restaurants including ones that have much higher of it, they appear to be better but they use exactly the same ingredients.

Like, there is a problem with the restaurant food in general out here. Because they're using bad oils and MSG that's hidden and lots of non-organic stuff and all that but I said, "Why don't we go to McDonalds, you can order whatever you want, they'll give you a toy and it will taste really good."

The kids looked at me like I was nuts. They said, “We won’t do it.” I said “No, it’s going to taste good, it’s okay, I’ll go there with you, we’ll have a McNugget.” and I’m going to myself, “God, I’m not going to eat that crap, I’ll feel bad for a week.”

They flat out refused, they said, “We will not go, we have eaten food that makes us feel bad.” Because they know what it’s like, they’ve eaten bad food and then they yell at each other and they don’t feel good. It’s like, “We don’t like how we feel that way so no, we’re not going to do that on purpose, are you nuts?”

Alright, I think the message landed with them.

[0:23:53.1] AVH: Nice, yeah. That’s pretty good, if they’re getting that that early, that’s pretty good. I guess that answers my next question though. One question I had maybe you wouldn’t want to admit this to people but do you ever just let loose and say, “You know what? I’m going to eat this crappy food or I’m going to have this drink or I’m going to go – I’m just going to not do all of my bio hacking schedule. I’m just not doing it, I’m just going to sit around, maybe eat a burger.”

Do you ever do that? Or I guess, like what you just said, you kind of know it’s not worth it, it doesn’t make you feel good and you don’t crave it.

[0:24:27.8] DA: This has been a long path for me, when I was really working on WeightLoss and back in about sometime in the late 90’s. There’s a guy named Rob Vegan who wrote a book called *Natural Hormonal Enhancement*, he’s one of the first natural bodybuilders. His books were powerful and he was the first guy to talk about a cheat day.

The modern diets that allow a cheat day where you just eat garbage – those are profoundly bad for you. I used to do this and I remember because I’d be like, alright, it’s like Saturday night, I’m going to go have like a chocolate cheesecake thing and just go nuts and have like bread.

Crusty French bread from my favorite place in Silicon valley there called Burk’s restaurant, I get like a grass fed – actually, it wasn’t grass fed back then. I’d get like a ribeye and dessert, all that

stuff. The problem was, I feel okay the next day but then Monday would come around and I was just like a complete zombie.

I would have these profound cravings for bread, one piece. It took me a couple of years of this to realize, you know what? Every time I have a cheat day, I get cravings for it four days and I'm not at my best. Screw that noise.

What evolved now is in the Bulletproof diet, I recommend, one day a week, have a bunch of carbs. But don't have Monsanto sprayed, gluten enriched, hydrogenated fat, vegetable oil, MSG. Don't eat all the crap. Because you will pay for that. What I do is, no, I'm not in ketosis all the time, I don't even recommend that. Being in ketosis, some of the time is great.

Fasting some of the time is great but being religiously rigorous about this stuff is actually a form of stress and the body doesn't like solid states. I have been a massive proponent of cyclical ketosis for a long time. Sometimes, I'm like yeah, I'm just going to fast for 24 hours and it's good, it's convenient. Other times they're going to do a Bulletproof intermittent fasting which is like, something I invented where you use exogenous ketones in the form of brain octane oil and not these keto salts that are apparently bad for your mitochondria.

But, I take that in my Bulletproof coffee and I just don't pay any attention to food and I have tons of energy and I like my life. I'm not going to break that but right now, it's light to 11:00 at night, I have a garden full of strawberries and raspberries.

You know, last night, I didn't eat low carb. I had a huge bowl of strawberries and raspberries and I put some sheep yogurt on it which I tolerate reasonably well even though it's got some sheep casein. It's still not ideal but it's pretty good in the overall scheme of things.

This is called graceful degradation. Instead of just eating crap, I'm like okay, I'm going to eat something that isn't as perfect as it could be but it's still good enough. That's why everything on the Bulletproof diet that the roadmap is free. People can download it from the Bulletproof website and the roadmap is like "Look, this stuff isn't Bulletproof, this stuff is suspect."

“It may really trash you and you may be okay with it and this stuff is like kryptonite, just never eat it.” That way when you want to cheat, you’re like, “I’m going to have a dessert with extra sugar in it, fine.”

Maybe you could not have the corn syrup and the bad oils and that’s how I do it. You know, last night also, my father in law’s in town, we had some really nice organic French red wine. Funny enough, that wine doesn’t cause the symptoms. It’s low in mycotoxins and it doesn’t have glyphosate in it like most American wine these days.

Funny, I tolerate that really well but knowing that food can make you weak and knowing which foods make you weak versus strong means you can choose. Alright, today I’m not going to eat perfectly but I’m going to eat something really delicious. I don’t do all my bio hacks every day.

Some days I do more than I planned and some days I don’t do any at all because I’m a CEO, award winning podcaster, New York bestselling author and a dad and a husband, I don’t have time to do five hours of bio hacking every day, are you kidding? I’m lucky to get 45 minutes.

[0:28:37.2] AVH: Right, graceful degradation. I like that. That’s a good sound byte. Dave Asprey eats berries and cheap yogurt sometimes. I like it.

[0:28:44.9] DA: Sheep yogurt, not cheap yogurt.

[0:28:47.3] AVH: Okay. Either way, sheep yogurt’s actually very good. Okay, alright. Still a good sound byte. Okay.

[0:28:55.0] DA: I don’t eat cheap yogurt.

[0:28:56.9] AVH: Okay, that leads me to my next question about the amount of time and the actual sort of daily bio hacking routine you have. Because I read some article that said, you take more than like a hundred pills and supplements every day. Is that generally accurate?

[0:29:12.7] DA: I take 150 pills a day on average.

[0:29:15.3] AVH: Okay, do you have like an app or a program that helps keep track of all of this? Do you have someone who manages it for you or is it just become second nature because you've been doing it so long and it's like, it's wrote for you now?

[0:29:29.8] DA: Well, for many years, I managed this myself. What I used to do in the early days and what a lot of people and they decide, look, I'm going to aggressively supplement and there's people who say, "It's a waste of money, you might have expensive pee." I guess, my goal is to have the most expensive pee on the planet, I'm totally good with that.

[0:29:45.0] AVH: Another sound byte.

[0:29:46.8] DA: It means that I had all the nutrients my body needed and it was happy to let go of the rest of them. Having nutrients present in my kidneys and liver actually improved the performance of my kidneys and liver. It's a question of what supplements you're taking.

Are they right for you? And mine are. What I used to do is I would get this, for retiree kind of people, these pill boxes and I put my little vitamins in each one ahead of time. There's all kinds of problems with doing that. One, they're not sealed for air and air degrades your supplements relatively quickly. Two, doing the same exact thing every day is not what our bodies are designed for.

What I started doing is every morning, I open the vitamin cabinet, I have a little, like an armoire that's setup where I have the stuff that I take every day and I then say, you know what? This morning, I don't – my body doesn't want me to take this. I'm just going to skip this one, I don't have any desire to take it.

It turns out, if you take a cow and I have an interview on Bulletproof Radio with Glen Elzinga from Elder Spring who raises like semi-wild cattle. He's a soil ecologist, he's like "Dave, what do cows do is they walk around and they find exactly the tuft of grass or shrubs or weeds or whatever that their body needs and they'll eat that one and they'll skip the next one.

They'll go to the next one." They're constantly finding the nutrients that are best for them right there. We're no different. If you can listen to that signal and after a few years of this, you kind of

know, today, I just don't feel like taking that one, I'm not going to take it because you know what they do.

There's a bit of a nuance to it that means I vary what I take. But when I travel for instance, I have an assistant and I have a spreadsheet and on a spreadsheet it's like "Hey, here's what I want for this trip." Funny enough, if I'm going to be crossing time zones, like be in the air a lot, I'm going to be restricted on sleep, I'm going to be doing like a really intense media schedule, sometimes I'll have 10 or 12 hours of interviews where I'm on camera.

Rushing from the Doctor Oz show to the New York Times, to Bloomberg and doing a radio interview and then you're going to do a book signing and then you're going to give a talk. That is like running a marathon, it's really intense. I'm going to change my supplement regiment to support that level of intensity and I'm going to put it in my spreadsheet.

Before, I would pack the pill things but it turns out I was spending too much time before a trip so now I have my local assistant to help me do that.

[0:32:08.2] AVH: Okay, that makes a lot of sense. Adjusting the supplementation based on what's going on in your life obviously. I mean, that seems like common sense but maybe we aren't all thinking that way.

What about – again, for you, this is now becoming second nature but for those of us who are just getting into this bio hacking thing and are playing with supplements. How do you suggest, gradually I suppose, adding in supplements? Because say I read headstrong and there was a ton of stuff in here and I suddenly have a dozen plus different vitamins or supplements or antioxidants that I want to take.

How do you recommend we start implementing them so that we don't, for example, take half a dozen and something isn't working or something's working great and we don't know what it is because we're taking so many at once. What's the best way to kind of layer this in or do it gradually?

[0:32:57.1] DA: This is one of the greatest fears that I had to overcome. This comes from western reductionism straight out of the pharmaceutical business. The assumption is that, there's one thing that works but biology isn't like that.

Think about it like this, if you wanted to discover bread and you are a pharmaceutical scientist working for Big Pharma, here's what you'd do. Well, I took the yeast and I baked it and nothing happened. I took the water and I baked it and nothing happened. I took the flour and I baked it and nothing happened. Therefore there is no bread.

What actually happens is you have to mix them all at the same time, let them sit for a little while and then bake them and you get crusty, delicious bread even though it's bad for you.

[0:33:42.0] AVH: Stop talking about this delicious crusty bread, I'm going to want to eat when we're done with this chat.

[0:33:48.6] DA: What if God forbid, life was a multi-variable problem? There wasn't just one vitamin to rule them all. By the way, if anyone knows that one vitamin, could you tell me? Because I spent 20 years looking for it and it doesn't appear there is one.

[0:34:02.0] AVH: Right.

[0:34:03.5] DA: Just like, is there one thing to stop aging? No, aging is death by a thousand cuts. If I can just cut out maybe 800 of the cuts, I'm probably going to really enjoy my life and live a lot longer too. But I'm not going to cut out all thousand, it's probably not possible and if it's possible, I wouldn't like my life. If I spent so much time focusing on being perfect and worrying about getting the last 1%.

The first thing is, recognize, you know, it's entirely possible that one of the 10 supplements you're taking, you could live without it and perform perfectly well. But, if you do what I used to do when I started this, back when I was overweight and I was having cognitive dysfunction and all these problems, if I had just tried them one at a time.

I'm going to try this one supplement for three months and then I'll move to another supplement like after two years, I'm like, you know, it's going to take me the rest of my life to try each supplement one at a time and then I missed out on all the synergies that happen.

One of the great examples is in *Headstrong*. I write about polyphenols. Polyphenols are a broad class of compounds and there's abundant evidence that when we say, ridiculous things like eat a wide variety of fruits and veggies – as if fruits and veggies were the same thing. Like one is food and one is dessert.

When you do that, what you're getting is a broad variety of polyphenols. These little signaling compounds, we like to call them antioxidants but they're actually light signaling compounds that your mitochondria require to function at full level.

Yes, coffee is the number one source of polyphenols and it has a rich source but tea has different polyphenols. Rosemary and blueberries, all these other things have different polyphenols. It turns out you need a mix of them and that means there is no one supplement you need to take, that means you want a blend of polyphenols.

[0:35:44.9] AVH: Alright. Don't stress out too much about painstakingly trying each supplement for six, eight weeks or whatever. Just kind of try what you want to try and try to be as intuitive about how your body's reacting as you can I guess.

[0:36:00.5] DA: It's a fool's errand to try things one at a time. Here's the deal. Find the outcome you want which is more energy, weight loss, focus, you want your skin to look good, whatever it is, you want your blood sugar to be more good.

Buy every supplement you can find that does that and take them all for two months. If at the end of two months, you're like "Holy crap, I got the results that I wanted." Well, there you go, now you prove something to yourself. Stop taking some of the supplements and see if you still get the results you want.

That's how to get results in the real world versus this ridiculous weight we put on our shoulders that says, I have to find just the one that's going to work. The core assumption that it's just one

is a false assumption that has not been proven, far more likely reality is that it's more than one thing.

Try everything for a little while and see if you like your life. Then back off so you can save some money and you can tweak and tune but just one variable at a time, it just doesn't work.

[0:36:57.8] AVH: Got it. We have to talk about coffee, we can't speak to the Bulletproof coffee guy without talking about coffee. It's such a massive part of all – I feel like all of our lives or most of our lives and when it's done right, you know. It's one of the healthiest parts of our diet perhaps considering the antioxidants and the benefits of caffeine.

I guess so many of us kill it by adding sugar or what I read about in your book that I really didn't, I really wasn't aware of was how detrimental subpar coffee is. I guess I didn't consider that, you know that there's higher quality coffee and there's better coffee but I didn't realize maybe that cheap, sort of mass produced coffee is actually harmful and potentially moldy and really bad for your health. Can you talk about that a little bit besides obviously buying your high end coffee, what are some of the main things folks should be really keeping an eye out for?

[0:37:51.8] DA: Let me walk you through this, it's kind of funny. I started Bulletproof as a blog without building a list, without a business, it was like look, I make a quarter million dollars a year. My job is to fly around the world, go to five-star hotels and give key note speeches about computer technology, cloud computing stuff to executives.

It's not really a bad life. Stock options, taking care of my family. I didn't need to start a company, in fact, I wasn't really intending to start a company. What I did want to do though was say look, I spent at the time, I spent about \$300,000 hacking myself and I'd learned so much and I realized, how many dollars I wasted, how much struggle I had spent doing this stuff and it wasn't necessary.

The knowledge was out there but it wasn't presented well and it hadn't been filtered right. I started a blog, figuring, if five people read the blog and it changes their life, it's a huge win for me because if someone had done this for me when I was like 20 or 16 or 25. My life would be

so different now and I love my life now. But man, I have really struggled and I've invested so much money and time and energy in becoming an expert on this.

I shouldn't have had to do it, I should have gone to my doctor and she said, "You know what? Quit eating the crap that I told you to eat last week, sorry about that. Here's what to eat, here's how to sleep, here's the other stuff. If you just do this, stuff will go away and I won't have to put you on antibiotics for 15 years straight the way I did." Stuff like that right?

This was just about like giving back some of this knowledge without an intent other than that. And then, while I'm doing this, I had recognized, I'd given up coffee for let's see, for five years, just about. I quit drinking coffee because I would drink it and an hour or two later, I would get like sugar cravings and I'd get a headache, sometimes my joints would hurt.

I would feel this like anxiety in my chest. This sucks. I quit coffee and it made me sad, I'd been a raw vegan for a while. I tried all sorts of different things and then I went to Nepal and Tibet and I experienced yak butter tea in the Himalayas which was the genesis for the full Bulletproof coffee recipe.

I came back to the states and I had a cup of coffee, really high end coffee and I'm a coffee connoisseur so I knew what I was drinking and you know? I don't have any of the coffee symptoms, hooray, I'm cured. I'm no longer "allergic" to coffee. The next day, I had another high end coffee and all of my coffee symptoms returned.

I just said, wait a minute, I didn't get allergic to coffee overnight? It's not me, it's the coffee. I dug in on coffee biochemistry and I came across all this information about toxic mold that grows in coffee. What happens, you can't make this up. Every country in the world – actually, that's an overstatement.

Most countries and certainly every advanced country in the world has legal standards for the amount of mold toxin in coffee. This isn't like mold spores or anything like that. This is a poison made by mold. Penicillin, the antibiotic is made by *Penicillium* the mold but there is no mold in penicillium, it's just the chemical that has a profound effect on you with a tiny pill.

Well, it turns out that China, Japan, all of Europe and most of South America have rules, strict rules about one potent mold toxin that's in coffee. The US has no standards. So coffee that's illegal to sell in those countries is sent to the US and then we drink it.

I do not make that up. I have 35 studies supporting this on the Bulletproof blog. You couldn't make that up if you wanted to. The US coffee industry just says look, it's a solved problem. Well, sorry guys, not according to my lab testing.

I was in Denver, I was still working for a big computer tech company. I was feeling like a zombie from all this travel so I took a taxi for a half hour across town to go to the highest end coffee place I could find and I ordered the least likely to be moldy coffee and I drank it and it was moldy. I felt like crap and I gave a subpar keynote and I came back to my house and I said, I'm going to get lab tested coffee.

I'm going to find out how to change the coffee process. The problem is, the market size for mold free coffee is zero. I didn't know if anyone cared so I went to my tiny blog and I said, hey guys, I'm doing this, does anybody want to try it?

I got enough people to be able to afford the infrastructure changes and we made the Bulletproof coffee beans that are lab tested for 27 toxins and I eventually got the president of the Specialty Coffee Association on video with me in Guatemala at our coffee plantation, talking about that time he was in Japan when the trade minister in Japan rejected a thousand shipping containers full of coffee because they were too moldy for Japanese consumers to drink.

I said, "What did you do with the coffee?" He said, "We sent it to the US for Americans to drink because it's legal to do that." Okay, I don't make this stuff up right?

[0:42:54.9] AVH: Scary.

[0:42:56.0] DA: Bulletproof beans are processed differently in Guatemala in Columbia. So the toxins is called okra toxin A is the primary one. There is a bunch of other secondary metabolites that amplify that one and our standards are far in excess of any government for that one toxin. We're the only company with a multi-micro toxin standard for coffee. So what we're doing is

exceptionally clean coffee and funny enough, I drink that and I feel amazing. I drink award-winning world's best cup of excellence coffee and quite often it tastes amazing.

You have an orgasm in your mouth but then an hour or two later I'm like, "Why do I feel not so well?" and I want to yell at my kids. This is the biological response because the ancient enemy of our mitochondria which are bacteria is... fungus. There's been a billion year war between bacteria and fungus. That's why antibiotics is so powerful against bacteria. Unfortunately as I wrote about in *Headstrong* and in the Bullet Proof Diet, the toxins that grow in coffee are mitochondrial toxins.

They're bad for you and by minimizing them, you won't to eliminate them in your diet. They are very common in grains, you feel better. In fact, a lot of the reasons why paleo works, is you eliminate grains. You eliminate one of the biggest sources of mold toxins and when you do that funny enough your gut heals and your kidneys work better, your liver works better and your brain works better. Your body can start doing what it is supposed to do instead of having a higher toxin load.

This is mother nature's toxins not man made toxin. Except for the fact that our farming practices and specifically Round Up, glyphosate and some other toxins – when you spray it on the soil, these soil fungi, these are actually the things that make the toxins. They make a 100 to 500 times more of these toxins when they're assaulted by manmade chemicals. We put ourselves in this situation and Bulletproof coffee beans are that way.

Alright, let's say that you are at the coffee shop, what do you do? And this is by the way my second blog post. People are saying, "Dave is out to make a mountain of a mole hill." I'm like, "Well I don't know, read all the research on the blog." People can look for *One Ugly Mug* is the title of my blog post where I talk about all of these toxins but what you do is, you go to your coffee shop and you say, "Hey I would like single state coffee" because most coffee companies will blend coffee.

Here's what they do, they go to a Coffee Broker and they would say, "I would like beans that have approximately this profile that are this grade and this scored ranking." Then they roast them and mix them with other ones to make them taste the way they want them to taste so they

get a consistent flavor for people. Unfortunately when you blend beans from five different places that are processed at five different locations, what you get is five times more risk of getting these toxins in your brew.

So I tell people get single estate Central American right now are pretty good but there's been some draughts. Sometimes Columbian is better. It depends on the year because environment variables control a lot of the mold formation. Then it turns out there's two ways of processing coffee. If you have seen natural processed coffee, don't drink it. It will taste amazing but you should expect to see colors when you drink it because natural processed coffee is just left on a tarp in the sun and it does mold.

And that dries up the coffee fruit and they can remove that part of the pulp and then they roast it and you drink it. Well, the newer process is called washed coffee which does, in studies, lower but not eliminate the mold load. With Bulletproof coffee, we use a continuous flow of coffee separation where we actually put infrastructure in above the fermentation tanks. So it is not fermented at all and then it's lab tested.

There's stuff you do during harvesting. During growing, during soil husbandry and even transportation of the beans are all variables that go into the Bulletproof process. So what I can tell you though is that if you go into a coffee shop and you say "Single estate washed coffee", you are likely to get coffee with a lower burden but it's not going to eliminate the burden it's just better than it otherwise could be.

[0:46:52.5] AVH: Oh boy, okay so just to burst everyone's bubble. If they heard us say that any coffee that you're getting from massed produced big box kind of coffee shops and even fast food places that offer coffee, they're pretty much rife with toxic mold and they're terrible quality and you should be avoiding it, right? Is that fair to say?

[0:47:14.4] DA: It's not fair to say that. I am not going to throw my coffees brothers under the bus like that.

[0:47:20.5] AVH: Even McDonalds? Even the McDonalds drive-through coffee, you don't want to throw them under the bus?

[0:47:24.7] DA: Do you know how much work McDonalds has done to improve the quality of their coffee over the last 10 years?

[0:47:29.6] AVH: I know for a fact that it tastes pretty good.

[0:47:32.4] DA: McDonalds had the world's crappiest coffee 20 years ago. They are known for cheap nasty coffee and they have really invested in their coffee business in order to improve the quality of their coffee. I respect that and I respect Starbucks too. I mean who put espresso on the map? You should care about the taste of your coffee? That was Starbucks so thanks guys. In fact, I have one of the first 10 Starbucks employees working for me at Bulletproof.

And my original investors are the guys who were the first investors in Starbucks. So thank you for putting coffee quality on the radar. What happened in coffee is what happened in big food. Look, there's only two things companies traditionally care about. One is how does the food or the coffee taste and the other is how cheap is it. Those are the only things that matter and what matters at Bulletproof is how does it make you feel?

That's what matters most. I will engineer every step of the process to make you feel amazing after you eat something I make or you drink something I make. Number two is flavor and number three is convenience in that order. Number four is cost. So yes, you paid two bucks a bag more for my beans but there's lab testing from multiple labs in order to detect these hard to detect things and there's a whole new set of infrastructure that we had to buy in Guatemala and Columbia in order to produce the coffee this way.

I am okay to do that because I know how I feel when I drink it so it's that mindset. So no, I am not going to throw McDonalds and Starbucks and Pete's and all these other companies under the bus. There are some great tasting coffees out there. It's just that they're great tasting. What I'm going after here is how you're going to feel when you drink it. I hear this over and over. People saying, "Dave, I put brain octane in my coffee but I just bought whatever my coffee was. I thought you were full of it".

“And I finally tried your beans and you know what? I don’t have my afternoon crash and sugar craving the way I always did.” Like yeah, four hours after you drink it when it hits your kidneys your body is like, “I got to have some glucose now to help oxidize this stuff so I can escort it out of the body. Could you eat a bagel? Can you have some candy?” and then you get the cravings. I feel very predictable when I have my beans. I travel with my coffee beans and I don’t drink other coffee.

Because I reliably don’t feel as good when I drink it and I am more sensitive. I lived in a house with toxic mold. I did a whole documentary. It’s at moldymovie.com. Do you know what molds in your walls and the air will do to you? It’s even worse than mold in your food. This is one of the biggest things affecting people’s biology that’s outside the world of paleo. If you are half a buildings, especially schools have a mold problem and you breathe this stuff and it affects your cravings.

It affects your cognizant function, it affects your mood and if you’re drinking it in your food, you’re eating it in your grains, you are not going to like how you feel. So I’ll just tell you some coffees are better than others and I just explained, get coffee that came from just one location, hopefully a small location and then you are basically flipping a coin. Was the cement lined tub where they let the beans sit for two days, in open air, usually with unfiltered water what was growing in there?

You don’t know but you have at least coin flip chance that not much is growing in there so you might feel great when you drink it, right? And other times you don’t feel a difference because you don’t have that mitochondrial DNA but still, this is a documented kidney and bladder cancer causing thing. So it’s probably still not good for you but I did this because I had to quit drinking coffee when I couldn’t get clean coffee. So I put that all into it out of love for coffee with no knowledge whether or not anyone would ever buy it.

[0:51:06.7] AVH: Got it, okay. So no throwing people under the bus but it is worth knowing some of these high level kind of things that you laid out, so that at least we can now make informed decisions and pay attention to how different coffees make us feel. Then we can decide from there so that makes sense.

[0:51:22.7] DA: My goal really, I would like to be able to go to any coffee shop and walk in and say, “Hey I’m Dave, the Bulletproof Coffee guy and I’d love to try your coffee and to know I am going to feel good.” In order to do that I believe that US and Canada should have at least the same standards as the rest of the world. If not better ones. But if we do that, the cost of coffee is going to go up and if you go to the Specialty Coffee Association of America, people are now talking about mold in coffee for the first time.

The last time was in the early 90’s and I don’t know if it’s this year or next year but I’ll be giving a talk there about this. Because this is an industry problem and it is one that I solve for my own uses and it turns out 48 million cups of coffee last year like, “Okay other people care about this.” Because they feel the difference and the science is there. Like anyone who says that there’s no science behind this, just drink organic coffee or something, you have to be wilfully ignoring stuff.

Or the fact that the one vocal critic that tried to discredit this stuff was an investor in a coffee company that doesn’t do testing. Come on, there’s too much science here to deny this – that’s why every government, except ours, has put standards in place for their people.

[0:52:33.8] AVH: Okay, so one aspect of self-care and maybe I am speaking for myself but I don’t think I am, one important element of anti-aging for a lot of people is not just feeling young and feeling good but looking good to. One thing that I don’t think you’ve ever seen you address, maybe you have and I have missed it is skin care. Even sun protection. But the idea of external skin care and protection. Obviously you are maximizing what’s going into your body but what about what’s going on your body? Are you big in skin care stuff? What are some products that you use or you’re into?

[0:53:10.4] DA: There’s number one thing you could do to have good skin and this is something where I think paleo and bio hacking and Bulletproof are very aligned is. The vast majority of what’s happening in your skin happens inside and it’s expressed outside. So I used to have this horrible subterranean pimples. It would take three days to pop even as a young adult. Well that’s how inflammation comes usually from nutritional things or from environmental things.

And you’ve got to get that under control and then you have to have the right raw materials to make skin which is mostly collagen and the right kinds of undamaged fat and yes, Bulletproof

grass fed collagen is the first collagen on the market like that. There's some copycats out there but we have some special production processes for it. So you've got to address it from a nutritional and specifically avoiding inflammatory stuff perspective.

The next thing though is you want to get some sun on your skin. It's the exact opposite of what they tell you. Like if you bake your face and skin in sun all the time you are going to get wrinkles. If you get 20 minutes of sun on your skin, your skin requires ultra violet light. It is exquisitely UV sensitive, it is actually a growth factor. Red light is also a huge difference. So I use light exposure to specific frequencies of light as part of my skin care and then the skin care product that I use the most is from Alitura.

My friend, Andy Nylov and he was at Paleo FX, he came on Bulletproof Radio. He is a cover model for Oakley and he's on a couple of TV shows and things like that and he got into a horrible accident that ripped off half of his face. He went hard core Bulletproof and seven weeks later, he was back on the runway remarkably. But the whole time he was putting a clay mask that he invented on his face and it caused rapid healing.

So he launched his thing on Bulletproof Radio. He wasn't planning to launch the company. He just told his story and so many people wanted to buy it that I've been an adviser and backer of his company. So I get access to his beta stuff and I have been using Alitura, the entire line of products. That's my primary thing and people send me other stuff. I've used a variety of other things on and of. But my go-to on a regular basis, the ones that we call the clay mask things in the shower.

But really, it's the daily serum and moisturizer stuff. And look, I'm a guy. I am a computer hacker guy where the last thing guys do is to really take care of our skin. I also run an anti-aging research institute. One of my board members was 88 years old. His name was Mike, he was dating a 35 year old. Let me tell you, Mike took care of his skin. So when you're an old guy like man, I wish I had taken care of my skin. So as an entrepreneur, I finally learned in my 30's that you should listen to people far older than you.

I wish I had that wisdom when I was young to listen to older people. So because of that, I do take care of my skin. I am not obsessive about it but when I wake up in the morning I literary

take 30 seconds and smear some stuff on my face and before I go to bed I do the same thing. I don't wash my face twice a day. I don't wash my face every day but I do wash my face on a regular basis and I do just put basic stuff on there and these are natural products.

They work exceptionally well and it's not a lot of work. I also find that I shave and when you do shave, putting the right stuff on after you shave makes a huge difference for whether you are going to get in grown hairs and stuff and so that's what I use Alitura for.

[0:56:38.6] AVH: I'm actually a big fan of Andy and his products. We just interviewed him for the podcast a few days ago as well. His stuff talks about food grade good quality products. I think it was his night cream that he was showing off at Paleo FX that you can literally eat and I tried some of it. It's not so bad so yeah, I am a big fan of that stuff too. But yeah, its key not spending a lot of time on it right? Its quality simple stuff so you are not spending too much time on that.

That makes sense and he shows too that men absolutely can and should take care of their skin too. When you feel good, you look good. You look good, you feel good. I mean why not?

[0:57:16.2] DA: Plus your skin is a detox organ right? So I've done dry skin brushing a while back and I do infrared sauna and things like that. But your skin is a big detox organ and if you are not taking care of the parts of it that receive the most wear and tear, it will age more quickly. I mean let's face it, there's something good about walking into a room and looking good. People treat you differently when you look like you take care of yourself.

When you dress not necessarily the best clothes in the room, but when you walk into a room looking haggard and look like you're homeless, people treat you that way. So there is something to be said for wearing reasonable clothes and looking like, "Oh yeah that guy bothered to cut his hair and shave and trim his nails." You can actually walk through TSA at the airport and they treat you different than if you walk through and they think you are carrying drugs.

That is how society works. I don't like it. I love to be able to never do anything. Live forever and look good or whatever but that's not how it seems to work.

[0:58:12.4] AVH: Yeah, so I just read an article on your blog about sleep that I thought was really interesting and that maybe goes in a different direction than a lot of current conversation around sleep. Talking about how maybe five, six hours sleep is maybe better than eight and the idea that getting – I feel like a lot of people are talking about get as much sleep as you can. Ideally you will be sleeping all the time and it's not necessary. It's all about quality than quantity, right? I think it says there that you can get by pretty good on two and a half hours of sleep at night, is that true?

[0:58:46.6] DA: If I sleep two and a half hours at night every night I am going to be a wreck after a week. But can I sleep two and a half hours at night for two nights and absolutely focus and bring it on stage and fly somewhere and be fully present? Yeah I can. I couldn't do that when I was 25 and what the data shows and this drives me nuts people are like, "Oh salt is bad" although there is increasing evidence that salt is actually good for you but hey, that's a whole other lecture I've given.

But the problem here is that if we say something is good or bad then you should have a ton of it or none of it. We tend to be very binary in our thinking. Here's the deal on sleep, there is no evidence that says getting more sleep is good for you if the sleep is low quality. So what I would say is get the best sleep possible and when you do that, you'll want less of it. The study that blew the lid off of this was from 1.2 million people who studied it for several years.

There is so much data gathered in the 1980's. When they gathered the data, they couldn't process the data. So someone went through it a few years ago with the power of the cloud which is kind of cool. My early career was helping to build that cloud. They went through it and they analyzed the data and what they found was the people who lived the longest sleeps six and a half hours a night. They don't get 12 hours of sleep at night.

In fact if you get 12 hours of sleep at night your odds of dying from all costs of mortality are dramatically higher from someone who sleeps eight hours a night and this isn't that less sleep means you are going to live longer. It means healthy people need less sleep. Shocking right? So your sleep efficiency is something that you can control and just in the last year, I have found a way to double the amount of deep sleep I get in the night.

Which is like, holy crap deep sleep is the restorative stuff. The more deep sleep and the more rim sleep and the less light sleep you get the better off you are. So I have focused my own practice on how do I get less sleep but better sleep? So it's like more sleep and less time.

[1:00:44.2] AVH: I also thought it was interesting that it talks about and I guess this does make sense but the idea that having a little bit of insomnia is not as bad as maybe medicating yourself with sleeping pills and stuff like that. If it takes you a little while to get to sleep, that's not the end of the world but over medicating yourself just to knock yourself out isn't good That again, that goes back to the idea that you are not going to get quality sleep when you're drugging yourself, right?

[1:01:09.6] DA: Yeah, the sleep drugs don't do that except for one sleep drug called GHB which is the most potent release of the human growth hormone. This was something that was widely available for people to go to sleep until it was branded as a date rape drug – even though it doesn't work very effectively for that compared to Rohypnol – which is the real day rape drug. But unfortunately, the FDA managed through press releases to get those stuff banned which is kind of weird.

But you can get prescription GHB, I don't remember its trade name and for people who really need a sleep drug, that is the sleep drug of choice versus Ambien or something like that. What you want to do is get this highly restorative high quality sleep and sleep drugs don't do that. What does help with that is controlling light exposure. I am an investor in a company that makes the true dark glasses and about 15 years ago I wore BluBlockers on stage for the first time.

I believe I am one of the people who really helped BluBlockers to come on to the scene in paleo because they were so effective for me in all these corporate board rooms and all of these cubicle land where I used to live. I quit wearing BluBlockers because it turns out during the day, you need some blue light for your mitochondria to know that it's day time. So the true dark glasses and yeah because I am an investor, I'm officially plugging here.

But I am just going to tell you, they make a half BluBlocker that you wear that allows some blue into your eyes but blocks the vast majority of it that is coming from your screens and the LED lighting and stuff that really does cause mitochondrial damage in your eyes and your brain and

your whole body. But then at night, it turns out BluBlockers don't go far enough because we have these melanopsin sensors in our eyes about 5% of the light sensors in your eyes are light you can't see.

It's light that goes directly into a part of the brain called the SCN and the SCN is what tells your body that it's nighttime, so to it can go into rest and reset and repair mode. So when you wear the true dark twilight glasses they block more than blue light. Every spectrum of light that is documented to control the sleep-wake cycle, gets blocked. So you wear this and you can see color very well but you can still read your iPhone, you can still do what you want to do.

If I wear those for an hour or two before bed especially when I am travelling, I will double my deep sleep and I can literally fly from Vancouver to New York, land at midnight. Go to my hotel room, sleep for 8 hours, get two hours of deep sleep in that eight hours, wake up at the normal time and then have a fully productive day. I have never been able to do that in all my history. It's all about specifically controlling the frequencies of light.

Those are called the true dark glasses and a company called Biohacked makes those and I don't use BluBlockers because weren't enough for sleep and there were too much during the day.

[1:03:54.9] AVH: This gives me some hope actually because I bought some of these true dark glasses at Paleo FX. I have some insomnia issues and some issues with getting to sleep. I've been using them before bed like while I'm reading and while I am puttering around. I haven't been necessarily managing like checking how deep my sleep is. I haven't been going that far yet but I have noticed that it does help me relax and get to sleep faster. So I think it is a step in the right direction.

[1:04:24.0] DA: That's awesome. We found that for a lot of people because I also run the 40 Years of Zen neuro feedback executive training center. So we have custom hardware and software for monitoring the brain. It's like a five day intensive program. It's nice to have those resources for my own brain but it also means that we put the glasses on people and we monitor their brain waves and after about 10 minutes of wearing the glasses, you start getting higher alpha brain waves.

This is a precursor to going to sleep as your brain waves slow. It is like noise cancelling headphones for the eyes and you want to do that before you go to sleep. So who would have thought that that for me is more effective than a sleep pill would be. But I use sleep mode which is a Bulletproof supplement that is an unusual mix of compounds that cause your brain to be able to sleep more easily and more deeply and things like that. So yeah, I take supplements for sleep but I don't take sleep medication ever.

[1:05:17.1] AVH: Right, so in your book you talk about all of these methods, we've gone over a few about bio hacking. From Bulletproof coffee, to cold and heat, to light therapy. There's something that anyone can take from this book but are there any big experiments or things that you've tried that maybe you had high hopes for that were just absolute failures? Because sometimes you can almost learn more from those things or at least they're entertaining to hear about.

[1:05:42.3] DA: Well I've had some mishaps.

[1:05:45.9] AVH: Yeah, those are the good stories right, the mishaps?

[1:05:48.4] DA: Yeah, there was a time where I was looking at cold exposure. I'm still a huge fan of cold exposure. I have a cryotherapy chamber with liquid nitrogen at my bio hacking labs at my house and a temperature controlled ice bath with a chiller unit and all that kind of stuff. I was travelling in New York and in New York, they happen to don't have bathtubs in hotels because the hotel rooms are smaller and I really was doing an aggressive cold exposure.

So I just packed myself with some icepacks and I lay down on the bed and I feel asleep. Bad idea. So I woke up an hour and a half later, I took off the ice packs and the next day I felt weird. I hopped on the plane and by the time I got home I got this angry red swelling over 15% of my body and I had 1st degree ice burns on 15% of my body. My inflammatory markers were through the roof for the next six weeks and it was painful. When you have that many inflammatory kinds your brain gets foggy because your brain gets inflamed.

It was terrible so you can overdo it. So there's some radical people out there that you have pack yourself on ice. If you're doing the Wim Hof technique, Wim Hof has been on stage at the Bulletproof conference. I love Wim's work but you'd better be prepared and conditioned and do the breathing and not overexpose yourself. That was something that didn't work. Well I wouldn't say it doesn't work. Ice exposure does work but it doesn't have to be that aggressive and crazy as it was back then.

[1:07:20.2] AVH: Right and I suppose with mishaps like that it's a learning experience because you are not going to fall asleep with ice packs on your body ever again.

[1:07:26.6] DA: Yeah, I don't fall asleep smoking. Well I don't smoke but I also would recommend don't fall asleep with ice packs, that's just not a good idea.

[1:07:33.4] AVH: Got it and what about you're obviously at the forefront of all of this bio hacking technology. Are there some things that you haven't tried yet that you want to? Or there are some things that are still working themselves out that you're interested in that you can talk to us about that we have not heard of?

[1:07:51.6] DA: Well there are a bunch of different smart drugs out there. Some of which are experimental grade and all and just like the other week, I was trying something called Agmatine. Man, I took that stuff and I had two days of feeling like crap. I couldn't make my brain work which I have counter agents for anything going on in my brain like if I am not in the zone, I can almost always put myself back where I want to be.

Whereas before, it might take me a month of just feeling like a zombie. So usually I might have a bad day here and there. Especially if I go into a real moldy building like I tend to get brain inflammation and I have to really aggressively counteract that. I couldn't turn my brain on two days after taking one capsule of that stuff. It's like yikes and this is one of the reasons that I would counsel people to try individual ingredients when you are looking at something like this.

If you have a really complex Neurotrophic stack with 42 ingredients and whatever – I'm picking that out of Hitch Hikers Guide to the Galaxy. I have no idea for direct action, it's 42 right? But you might find that one or two or 10 of those ingredients might not really not agree with your

brain. Especially when it comes to neurotrophic supplements. I also will find that coleen supplements. Almost every neurotrophic form has a ton of things that increase coleen in the brain and inhibit coleen breakdown.

And for a certain age of person, that would be people over 35, for some percentage of the population that's great. But for younger people or for even some people over 35, it causes headaches and muscle tension and muscle cramps throughout the body and you don't know it. I am one of those people. You give me one of those commonly sold coleen enhancing smart drugs stacks, I am not going to like my life. I'll be grinding my teeth and I'll have headaches and I'll get muscle tensions around my body and I am not alone in that. So just be careful on those things.

[1:09:51.2] AVH: Got it. We're about coming to a close here. I know you have to get on with your day but we do have to round out the trifecta here and we've going to talk about exercise a little bit. I know you have written lots of good pieces that are very clear and straight forward about how to optimize your workouts in terms of keeping them short, focused on intensity, compound movements, weight training to build lean muscle mass. All of this makes a lot of sense, combined with a lot of activity. Not necessarily cardio but things like movement and walking and stuff like that.

Also I guess the idea that most people who do exercise really overdo it which I can absolutely relate to. But can you walk us through like what you are actually doing over the course of the week? I know at your bio hacking lab, you have equipment and machines that are essentially in a lot of cases, they are doing the workout for you now, aren't they? Like that Bulletproof vibe machine that I tried at Paleo FX, can you talk us through that a bit?

[1:10:46.8] DA: Sure, I have to point out I post this thing on my Facebook page the other day. It was a squat helper machine out of Europe and it was the funniest video ever. It made the shake weight look like it was a high tech device and it's squats without the work and it's literary a hydraulic like you sit down and it pushes you back up like, "There you get a fix." No, you can't have the machine do the workout for you.

[1:11:07.9] AVH: Squats without the work, wow.

[1:11:10.7] **DA:** Visually, you can imagine someone sitting on a piston on just the video for work.

[1:11:14.5] **AVH:** Getting bounced back up, yeah.

[1:11:15.8] **DA:** Yeah but it just looked somewhat pornographic and the comment threads were hilarious because you're like A, that's not going to work and B, it's just –

[1:11:27.1] **AVH:** Obscene.

[1:11:28.3] **DA:** Yeah, that's the word I am looking for, thank you. Like really? But I guess people watched the video so.

[1:11:34.3] **AVH:** And people will probably still buy it, maybe.

[1:11:37.1] **DA:** Probably, the silicon models who had shapely posteriors. So what I do is in Headstrong, I go through the research and I am not looking to get swoll. I am married, I am 44, a heavy history of obesity. The people who have the longest adequate muscle mass but they are not walking around with 7% body fat and huge amounts of muscle because that's a load on the cardio system. You have too much emtor to do that. Emtor contributes to cancer.

If you have lots of it all the time which is why I recommend to high fat, high vegetable diet not a high protein diet. So there's things that go into this. Anyway, the research around how do I have the healthiest mitochondria? The strongest mitochondria? There's two kinds of exercise that are important, one of them is go for a 20 minute walk every day. That's it, go for a half an hour walk if you want to. Like do some yoga or whatever but 20 minutes of moderate walking.

Not running, walking. Then once or maybe twice a week, high intensity for 15 minutes. In high intensity there is two flavors. One is lift heavy stuff until failure without stopping between sets. The other one is sprint and when you sprint, sprint for 90 seconds and stop. One of the cool innovations that's in Headstrong is do what the cross fitters do. I am a huge fan of the intensity of cross fit. They really push you which is why you see that muscle development you see there.

But a cross fitter when they're done, they lay on the floor and they do that because they are destroyed. But that means you did it right. It turns out there's a difference between sprinting and walking and sprinting and either sitting down or better yet laying down. So sprint and lay down on the grass and get a little grounding in while you are at it. Lay down for a minute, get up and sprint again and that laying down allows the nervous system to reset more quickly.

So those are the two things and for me, what does that look like? Well I run two podcast episodes a week and writing books and I am venture back CEO who has raised 30 million dollars. So my life is busy and I don't waste time. A typical morning especially during winter when it's raining or something, given that I am in Canada. I will wake up and I do some family stuff and all of that but in terms of exercise, I will stand on the Bulletproof vibe for 20 minutes.

This vibrates 30 times a second. It is a frequency identified by NASA to make astronauts recover more quickly. It's the equivalent for going for a walk but it is actually more exercise than going for a walk. Ray Kurzweil just posted a big thing saying, "Oh look here's all these evidence that whole body vibration really is at least as good as normal exercise." So I will stand on this, I'll move around, stretch a little bit, do some aero squats on it but I am doing it in front of a UV high ultra violet B tanning lab.

Not to cause me to get a tan but just to cause me to sulfate my vitamin D and I am usually on the phone with my assistants planning my day. So I am busy getting my 20 minutes of exercise while getting two other things done and sometimes I will go for a walk in sunlight. Now it's sunny in the morning so I will go for a walk which is really good plus I don't have to drop off my kids off at school which means I have some more time in the morning to go for a walk.

[1:14:53.4] AVH: I was just going to say, I like any plan that keeps things simple and that also advices you to lie down a little bit and it sounds perfect to me.

[1:15:03.6] DA: Exactly and then from an exercise perspective. For weights, I'll tell you I don't sprint as much as I probably should like right now I have a broken toe from a yoga injury which makes sprinting really hard. So I typically do high intensity muscle stuff and that means either the ARX machine which I have here. It's like lifting heavy weights except you are fighting a

computer driven winch so that the load is constant. And you are always at maximum pressure on the muscle everywhere in the strength curve.

So you tend to get muscle exhaustion more quickly. It's ridiculously hard but it pushes you really hard. Or I will do electrical simulation with a Russian prototype electrical stem device that pushes your muscles beyond any reasonable level. That isn't really commercially available yet. Those are the two weight bearing things that I tend to do and even that, I might even do that once every couple of weeks because of my travel schedule but that's all it takes.

I am looking better now than I ever have and I'm 44. I am continuously amazed at what the body is capable of. I've also done a lot of work on stem cells and publishing a big piece on that. I've had the top stem cell scientist come and present at the Bulletproof conference. I am injecting various things, I've been on testosterone replacement with a physician's care since my late 20's because my mom had more testosterone than I did because of biological stuff and things like that. So I do take care of myself but I am continuously improving even though I am getting older.

[1:16:34.0] AVH: What about some inversion stuff? I was talking to Andy at Alitura there about his workout schedule which is a little bit more intense if you have seen that guy's biceps, he doesn't play around. But he does a lot of – like he has an inversion table like some of these upside down stuff. I know even for me, I like to do and incorporate handstands and stuff in my work out because I am told that being upside down is good and you are getting that blood flow to the brain. Is that something that you are into?

[1:17:02.0] DA: Yeah, I love hand stands. I'm not a big fan of headstands though. I can do them but I always feel like my neck doesn't like that. Handstands are fantastic and I have inversion table as well. Yeah, I will definitely invert. I do oxygen therapy and cryotherapy and one of my favorite things now that I've been doing quite a bit lately is called the Vasper machine and we're about to open bulletproof labs in Santa Monica, where we'll have a lot of this gear for people to come in and try right next to our coffee shop.

What the Vasper machine does is replaces two and a half hours of cardio with a 21 minute workout. But when you're working out, you're sitting on this cardio machine and you've got –

you're sitting on circulating ice water and you've got compression bands on your arms and legs that are compressing them with ice.

What happens is, all of that oxygenated blood that would have gone to your skin to cool you down, stays in your organs and your brains. You get like internal rejuvenation that's kind of ridiculous while the lactic acid builds up and your muscles like it would in a two and a half hour workout.

When you're done with the workout, you let the bands go from your arms and legs and all the lactic acid goes into the brain and the brain is like "Oh no, he just worked out for two and a half hours, I guess I should send out a repair signal."

You're kind of tricking the body into thinking you did more than you did, I love that.

[1:18:17.0] AVH: Okay.

[1:18:17.0] DA: That's cheating.

[1:18:18.2] AVH: Yeah, anytime you can trick the body, you're winning. Alright.

[1:18:22.8] DA: That's called the Vasper and that's something that's out of reach for most people at home. I'm a professional bio hacker and this is part of my RND facility but there are doctors and high end sports facilities who do have Vaspers. So you can just go and use it once a week and you'd be amazed at what it does.

[1:18:39.0] AVH: Got it. Okay, I think that's a good lead into our last question here. For those of us who are not professional bio hackers and you know, we don't even have any necessarily specific health issues but we're people who want to up our game. We want to feel our best, perform our best, look our best, all of that.

If you could give just one or two high level pieces of advice, like starting points. Things that we can take away from this podcast, besides buying the book of course, what are a couple like main things –

[1:19:08.8] **DA:** Ah man, you took it away.

[1:19:10.1] **AVH:** What are a couple of main things that people can really start to like think about and work on right away?

[1:19:16.4] **DA:** Alright, the science for these is in *Headstrong* and it's totally worth reading. But I'm going to give you the two things that are going to cost you probably the least. One of them is, at the end of your shower, turn the water on cold, all the way cold and let it hit your forehead, your face and your upper chest. After about 10 seconds, you're going to think I'm a total jerk and you'll jump out of the shower, that's fine.

The next day, do it anyway, after four days, it stops hurting and actually, I just went 30 or 40 seconds or a minute and I feel really good and I didn't even get cold. This doesn't cost you anything, it actually saves you money on heating your water for the last minute of your shower. It's one of those things that you have to do it for at least a week and you'll be like wow, I have a better day when I do this. Deal with the pain for a short period of time and it won't be pain anymore.

[1:20:09.8] **AVH:** Okay.

[1:20:10.3] **DA:** The second thing is, controlling light exposure really matters. If you can see streetlights through your window, you're doing it wrong. Get some blackout curtains and the true dark glasses are profound and they also make true dark dots. Go through your bedroom, in your whole house but specifically your bedroom and put the little dots that filter out all of the light that affects your sleep. Put them on every LED that you can see.

You walk in to your bedroom and your body believes you're in pitch dark even if there's a few little LED's around. Better yet, unplug everything. Get rid of this junk light, put dimmer switches in your house, don't use white LED's, get rid of your LED bulbs and put them back to halogens and put dimmer switches in and dim the lights at night.

We're not supposed to be under bright light at night, it's bad for you on a profound biochemical basis. On a blood sugar basis on an aging basis on everything you could think of.

Control that exposure and get some cold at the end of your shower.

[1:21:06.3] AVH: Awesome. Alright, well I mean, I think I could keep asking you questions all day but I think this is plenty for us to get started and if people want more, they can check you out online and they can *Headstrong*. Dave, thank you so much for your time, it's been a pleasure and I'm hoping to attend the Bulletproof conference actually in September this time for the first time. So hopefully I'll get to meet you then and ask more questions.

[1:21:28.0] DA: Count on it, it will be a lot of fun. It's going to be October 13th through 15th in Pasadena. Go to bulletproofconference.com to figure out more.

[1:21:35.4] AVH: Got it, hope to see you then, thanks Dave.

[1:21:37.3] DA: Thanks.

[END OF INTERVIEW]

[1:21:38.7] AVH: Alright everybody. I hope you learned a lot and got some good ideas to hack your health from Dave Asprey. I got to say, I'm kind of into this bio hacking stuff myself. Maybe not quite at that level but I really subscribe to the try anything once tactic you know? You don't know if something works unless you've tried it, so why not?

I do the cold shower thing, not in the winter because my willpower only goes so far but I do think that regular cold plunges feel pretty amazing. It's one of those you know, short term discomfort for long term gain thing which is really the case with a lot of stuff. Working out, eating well, it's like sometimes you have to put off the immediate gratification to get something better in the long term.

Anyway, have you tried any of these tactics in *Headstrong*? Are you experimenting with light therapy, heat stuff, cold stuff, supplements, any of that stuff? If you're doing any of this bio

hacking, I'd love to hear from you. Message us on social media, @paleomagazine or you could send me a note on Instagram @themusclemaven. Because personally, I'm just interested. I just want to hear what's working for people, what isn't. I just like to nerd out on that stuff.

Anyway, I hope you join us next week. We'll be chatting with Dr. Michael Rusho, a clinical researcher, author and health enthusiast on gut health. He practices functional medicine and he offers up a ton of great advice and information, not only on how to identify gut issues which is a whole topic in itself.

But also how to work to improve them. I think anybody who has had problems like this knows, it's a really complicated topic, it's something that's sort of ever evolving. This is one you don't want to miss. Make sure you subscribe to paleo magazine radio on iTunes so you catch it and all of these other amazing interviews that I'm doing, not biased or anything.

Anyway, that's all for now, thanks for listening

[OUTRO]

[1:23:17.8] AV: Paleo Magazine Radio is brought to you by the Paleo Media Group and is produced by We Edit Podcasts. Our show music features the song *Light It Up*, by Morgan Heritage and Jo Mersa Marley, and on behalf of everyone at Paleo Magazine, thank you for listening.

[END]