

Reclaim Your Health and Boost Your Brainpower

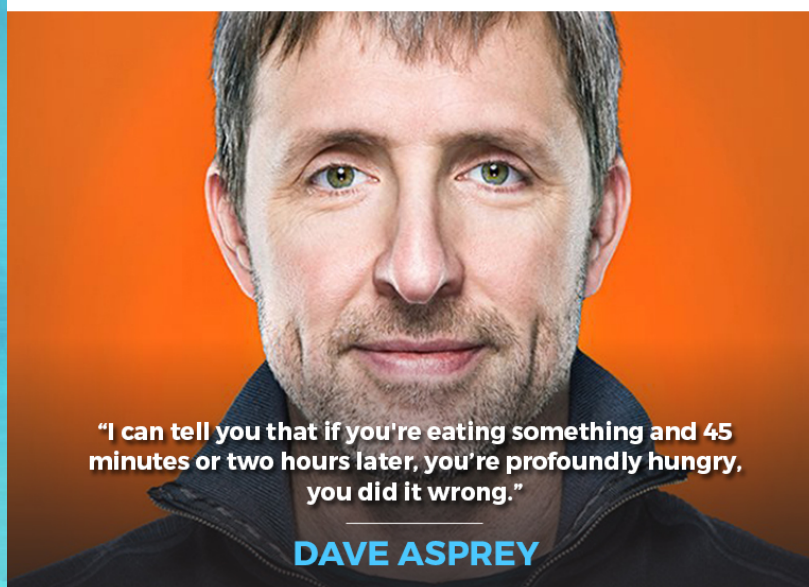
Transcript and 10 Point Checklist

Dave Asprey

Want to gain as much knowledge as possible out of The Optimized Geek? Read on below for a full transcript of this episode, as well as a **10 point checklist** that gives the next, real steps you can take for introducing these insights and optimizing your life.

The **OPTIMIZED GEEK**

HOSTED BY **STEPHAN SPENCER**



10 STEPS YOU CAN TAKE TODAY

**Want to take charge of your health, wellness, and success?
Here are 10 steps that can move you closer to your goals – today.**

- ☐ Have your Bulletproof Coffee first thing in the morning-which is your coffee with a few tablespoons of healthy fats-to stop mid-day hunger.
- ☐ To allow your body to fully express its capabilities and potential, stay away from stressful environments with bad light, air, foods, and relationships, and replace any negative programming in your head with more positive thoughts.
- ☐ Try Unfair Advantage, it will increase the efficiency of your mitochondria so you can make more energy for about six hours, and also has anti-aging benefits when taken regularly.
- ☐ Keep your sugar and net carbs to under 25 grams per day if possible to help with weight loss, food cravings, energy and alertness.
- ☐ Get your genes and hormones tested to have a better understanding of your body and the foods that you need-but make sure you get more than just a cholesterol test. You need to test your C-reactive protein and homocysteine as well.
- ☐ The toxins in coffee cause a jittery feeling, anxiety, a crash after a few hours, and sugar cravings. For a coffee without toxins, try Bulletproof Coffee.
- ☐ Watch Moldy: The Documentary to find out what signs you should be on the lookout for in your own home, how to properly handle a mold problem, and how to regain your health.
- ☐ Avoid sugar and focus on eating lots of healthy fats like avocado and salmon, moderate amounts of high quality protein, and tons of vegetables.
- ☐ Follow the Bulletproof Diet Roadmap to make sure that you are eating healthy foods that are going to benefit your brain function.
- ☐ Try to avoid grains, they have antinutrients as well as a lot of molds.

Transcript

S: Hello, and welcome to The Optimized Geek! I'm your host, Stephan Spencer, and it is my distinct pleasure to welcome as our guest for today Dave Asprey. I'm a huge fan of Dave! He is a bio-hacker extraordinaire. He's the author of The New York Times bestseller, The Bulletproof Diet. I was actually at his book launch party for The Bulletproof Diet. It's just an amazing book. He's been named by Men's Fitness Magazine as the world's most famous bio-hacker. He's the creator of Bulletproof Coffee, which has transformed breakfast for

“He's the creator of Bulletproof Coffee, which has transformed breakfast for millions of people around the world.”

millions of people around the world. He has the number one-ranked health and fitness podcast with thirty-two million downloads. He's just a phenomenon! He has The Bulletproof Executive. He has Bulletproof Radio and you got to check out all this stuff. Dave, it's great to have you on!

D: I'm excited to be here, Stephan!

S: Awesome! So, let's start with just the basics of biohacking-what are the most important things for people to realize that they need to optimize in terms of their diet, their brain performance, and their exposure to



environmental toxins? What are some of the key things that people need to get out of this episode?

D: The most important thing that you can get out of this episode is just to realize that you have way more control than you ever thought. We also like this idea this idea that we have willpower and we're just going to sink our way, want our way, and desire our way towards getting whatever we want. The problem is, that the body doesn't actually pay any attention to most of that stuff and it does what it's going to do it because the

body is designed to survive without a conscious brain in it-just the same way that a squirrel survives.

S: Mm-hmm.

D: It runs away from dangerous things and make sure to reproduce with other squirrels and it eats a lot of nuts-and those are the three things that you were designed to do. Not freeze to death and nothing too radical here but you have programs running that make you do those things every day in response to the world around you. The way you get control of your body, the way you control your mind, and the way you bio-hack is to change the environment around you, which changes the environment inside you, which changes what you're capable of doing.

S: Yup!

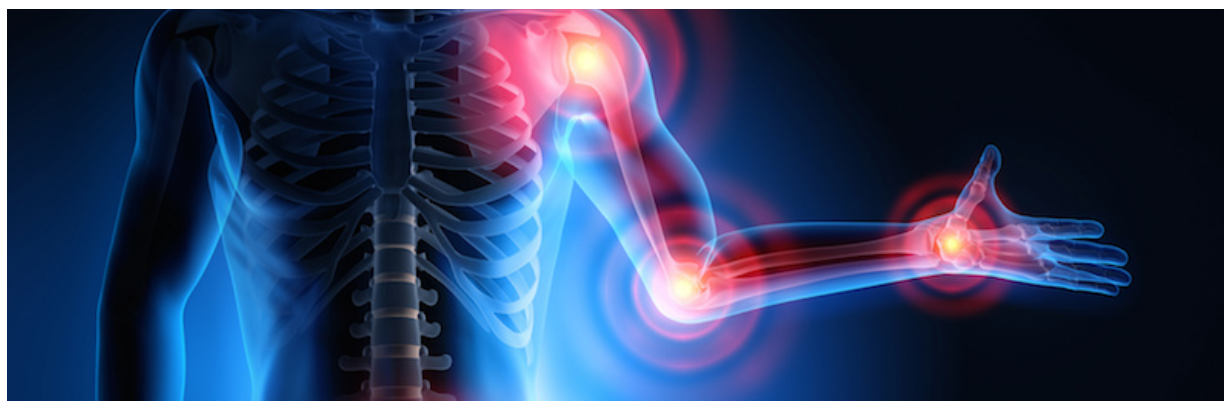
D: When we talk about removing toxins-well, certain toxins that come from your environment or from your food, they lower your ability to make energy in the mitochondria and your cells. You want to be running at full power-maybe you should have a full octane gas in your car instead of a gas that's gotten less energy in it. You shouldn't take things that sort of slow things down. You want to allow your body to fully express its capabilities and potential-that means, if you're in a stressful environment with bad light, bad air, bad foods, and bad relationships, then you've got negative programming running through in your head, you simply are going to struggle for every day of your life and it's going to be really hard. If you want to replace the programming in your head, you can do that. You can do it with cells that don't make enough energy or you can fix the biology. When the biology is fixed, doing the reprogramming work that almost everyone needs, if they're human, in order to do all the things they're capable of doing-well, you want to have a body that works well first. You start on the hardware then you work on the operating system then you work on the software-not the other way around.

S: Right. So, you went through a big transformation. You had this exposure to black mold that was really

“If you want to replace the programming in your head, you can do that. You can do it with cells that don't make enough energy or you can fix the biology. When the biology is fixed, doing the reprogramming work that almost everyone needs in order to do all the things they're capable of doing-well, you want to have a body that works well first. You start on the hardware then you work on the operating system then you work on the software-not the other way around.”

really causing a lot of havoc in your body. You had severe weight problems. Could you give us a quick recap on what happened with your transformation and where you got to now?

D: I weighed 300-pounds in my fourth year of university and I was obese as a kid. I started getting stretch marks when I was 16, arthritis when I was 14, I had asthma all the time, rashes, and strep throat every single month. I was living in a basement that had water damage and when that happens, you get toxic molds. Toxic molds interferes with your cells' ability to make energy, it interferes with your hormones, and interferes with your brain. I had many of the symptoms of Asperger's syndrome. In fact, on some of the tests, I basically met the standard for it and certainly had an unusual brain and response to bad food, bad sleep, bad air, and all the things I've talked about. The interesting thing though is that, I was able to hack all that stuff. I'm 43 now, I've lost my hundred pounds of fat and kept it off for a long time, and I've kept it off without willpower because when I was young, I knew I was fat so what I do is, I exercise a lot and all it did was make my body hurt more. It meant that I could bench press all of my thin friends while they were eating french fries and I was eating a salad. It's nice to just believe you can exercise your way out of all these other things but it just doesn't work like that. In fact, it's particularly cruel to say that. It's particularly cruel because it's harder for a fat person to exercise. They have more mass and they have all that extra fat because their cells aren't producing enough energy so they're storing energy instead of burning it and here's a metabolic dysregulation there. By getting rid of inflammation and removing hindrances, you get so much more progress but more importantly, you get the progress with a lot less effort. We've fetishized struggling and it turns out that when you do it right, it's not a struggle at all because it's natural, normal,



healthy, and easy. That's why Bulletproof coffee has become so popular because when people drink it, it does a specific thing around hunger suppression, they're like, "Oh, wait! I didn't care about food! Yesterday, I spent all morning resisting my cravings to donuts and today, I didn't care about donuts!" For me, that was a game-changer-an absolute game-changer. It freed up a lot of my willpower.

S: Right. Willpower is a finite resource.

D: Yeah. We didn't know that 20 years ago but we know that now. We've proven it in lab studies. You have

x number of decisions per day-one of my favorite studies, which was done in Israel, is, they looked at whether you were going to get released from prison by the parole board. One thing to do, if you're ever in prison, is to make sure that you have the first meeting or the first appointment with the parole board. You have like, an 80-90% chance of being released if you go in the morning. If you go on the last meeting of the day, when they've already made all these decisions, your chances of getting parole are about 10%. It doesn't matter what you did. It mattered on how many decisions the parole board has made-did they have decision fatigue or not? That's remarkable! Your day is the same thing and if all day long, you do what I used to do-I used to work in this company. It was one of the two main companies that created the networking business that supports the conversation we're having right now. There was Cisco Systems that everyone's heard of and there was a company called 3Com that finally, basically, Cisco kicked our ass, we got bought, I think Dell owns 3Com now-

S: Mm-hmm.

D: But one of the darlings of the very early tech business is, every day, when I was still fat, they would have these plates of cookies in the afternoon in the conference room. They're pretty good cookies, in the overall scheme of things, and I remember I sit there going like, "I'm fat. Cookies are bad for me and I'm not going to eat the cookie," and there'd be this conversation where I'm trying to pay attention to someone droning on about SEP integration and all this tech stuff but the voice in my head was like, "Cookie," and I'm like, "No!" "Cookie!" "No!" and so on and so forth and pretty soon, it comes to, "Cookie!" "Well, how about I just eat half of it if you'll shut the hell up, okay?" and then you'll eat half the cookie and then you're like, "Oh, so good! I'll just eat the rest of the cookie!" and then you're like, "I'm a bad person and I'm weak!" Well, no. What happened is, I was making decisions over and over and over to say "no." My desire for cookies, which was hormonally triggered and energetically-driven because my body is starving for energy even though it's storing all this energy, was pushing out of my brain and finally, just like a normal person would do, I give in, right? And then, I felt bad about it and blame myself for it, which was not intelligent, because, well, biologically, that's what happens when you say "no" a thousand times. You know who else does this? Little kids know this very well. "Mommy, mommy, mommy, mommy!" "Okay, fine! Whatever!" It's a known, valid strategy and for us to allow our diet to make our brains do that for the rest of the day? If you had a meal and then two hours later, you have a food craving and you're hungry, it's your fault. It's because you didn't choose the right meal to satisfy you and to turn off your hunger so I tweak my diet. The whole basis of The Bulletproof Diet is what you eat so that your brain works all the way and you don't have cravings and you're not hungry.

S: And what you not eat as well-that's just as important. Or, when do you eat.

D: It all matters. You don't have to know all the why's. As a biohacker, you're relying on the strongest form

“What are the proteins are least likely to trigger hunger, food cravings, and inflammation? And, what are the ones that are most likely to do it? So, you can choose the least likely ones, the most bulletproof ones, and the least kryptonite ones. The same goes for fats and vegetables. ”

of evidence and we have this weird fetishism in the last 20 years for evidence-based medicine. Evidence-based medicine means we look at all of the research that's out there and then we look at our clinical experience as healers like this is what physicians are supposed to do and then we use all that evidence to make a decision-that's good. What's actually happening now is, people are saying that evidence-based medicine means, if there is a double blind study that I agree with then it's a lie and a scam. Sorry, guys! That's not what evidence-based medicine is. It's based on clinical experience. There's something called empirical evidence and the most basic empirical evidence on Earth is, if you put your hand on a hot stove, it hurts so you don't do that again. There is no double blind study that I'm aware of where they

trick people and they have them touch stoves and not touch stoves to see if it hurt. Well, I can tell you that if you're eating something and 45 minutes or two hours later, you're profoundly hungry, you did it wrong. There's your evidence.

S: Mm-hmm.

D: Right? Whether or not there's a double blind study about that so, on The Bulletproof Diet, I made a one-page infographic and people listening can download it for free, you don't have to buy the book, although I'll appreciate if you do. You can get it from the Bulletproof Exec website, BulletproofExec.com, and the Bulletproof Diet Roadmap lays things out. You need some protein? What are the proteins are least likely to trigger hunger, food cravings, and inflammation? And, what are the ones that are most likely to do it? So, you can choose the least likely ones, the most bulletproof ones, and the least kryptonite ones. The same goes for fats and vegetables. A lot of people don't know that when you get a raw kale salad with a squeeze of lemon and a dash of some sort of bizarre tofu miso thing on it, you should expect to be hungry because there's not enough energy in that food and it's full of antinutrients. A great number of people are not going to be happy people two hours after they eat that. They're going to be frantically looking around for the bowl of candy that's in every conference room all the time now because people have been eating crap like that. If you're going to eat a salad like that, if you tolerate raw kale, which I don't recommend as a great long-term strategy to eat a big bowl kale every day, you better slap an avocado or two on top of it and maybe a big hunk of wild-caught salmon and then you've got a lunch. You are not going to perform if you're eating these little bits of, basically, worm food and rabbit food. It just doesn't work if you're going to

have a high-performance brain because our brains don't run on that stuff.

S: Yeah, and you mentioned raw kale is not a good thing long-term. There's something in it that is going to give you joint problems. Do you want to elaborate a bit on that?

“Raw kale has some antinutrients and one of them is called oxalic acid.”

D: Yeah, and I used to have this problem. I was a raw vegan for a while. I've tried almost every diet out there and I still experiment. Raw kale has some antinutrients and one of them is called oxalic acid. There's this bizarre thing for vegetables. If you are a vegetable, you don't have the ability to run away so

that means, your job is to reproduce-just like you and I, Stephan. Our job is to reproduce from an evolutionary perspective-so the vegetable says, “Well, if I'm juicy and delicious, I won't reproduce because everyone will eat me. Therefore, I'm going to develop all these crazy strategies,” Sometimes, you have a cactus-no one's going to eat that because it's too prickly. Other times though, some kale, you put chemicals in that and it makes you unattractive to insects and other animals like that. If you don't believe me, take a big piece of kale, fresh one, and try to give it to a horse. Now, unless the horse is a stupid horse, which most of them aren't, if you've ever raised horses, it will probably not eat the kale and it will spit it out. It does that because it has oxalic acid in it-there are antinutrients in there. If you look at the traditional eating of kale in humans-well, it wasn't the humans who had money who ate kale but it was humans who are really hungry who ate kale and they had this remarkable technology that's evolved over, probably, 50,000+ years, which is called cooking. They would boil it and dump the water, which reduces the oxalic acid. If you eat raw kale all the time, you should expect to get kidney stones. It won't happen to everyone because some people have bacteria in their gut or genes that make them more resistant to this problem but oxalic acid has even been implicated in some cases of autism and many cases of arthritis.

What happens is, if you get too much oxalic acid buildup in the blood, it forms crystals with calcium in the blood so if you're taking calcium supplements, you're at even more risk, and then these little, tiny, micro crystals get lodged in your joints and they can cause damage throughout the body. What makes more sense to me is, don't eat raw kale and if you're going to eat your kale, while you're boiling the kale, you can not only discard the water but you can also add some baking soda or some calcium carbonate, which is the cheapest calcium supplements, and that will precipitate out the oxalic acid before you eat it so it won't form the crystals in your blood. You will just form them in the food as you're cooking it and then you can poop them out. Do

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they teach you this stuff in medical school? No. Do we understand the biochemistry behind it? Yes. Does this mean that if you eat raw kale salads you are going to die? No. Does that mean the next day you might be a little bit more achy than before? I don't know, it depends. On the road map, the whole point is, look, this isn't a great practice. You should know it carries risk. In the middle of the road map, there's this area I call suspect foods. There's Bulletproof foods that, for most people, these cause no trouble and they make you feel great and they have lots of energy and vitamins and nutrients. In the suspect zone, there's all these different foods that cause problems for large numbers of people and you may be totally fine on them. Lentils are in there. Potatoes are in there. Kale is in there. There are a bunch of other vegetables

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where you wouldn't know it but if you eat tons of those-tomatoes too because they are relatively high in sugar and tomatoes are nightshade. Twenty percent of people get rheumatoid arthritis from potatoes, tomatoes, eggplants, and bell peppers. I didn't realize this. I grew up in New Mexico where you eat the spicy Hatch green chile, it's like a religion there-I love that stuff! My genetics tell me I shouldn't be eating that part of the nightshade family. For me, especially bell peppers and even cayenne, some of my favorite spices that I don't eat anymore. I suppose it can be anti-inflammatory, unless you're one of these one in five people, in which case your body

responds to these compounds called lectins. They are another plant-defense system and it causes muscle and joint pain so I can have a spicy chili and for the next week, my neck, my upper-back, and my joints, they all hurt like almost like I have arthritis even though I don't. If you didn't know that this was a potential thing and every day you eat something with cayenne or bell peppers in it, which, actually, a lot of people do order with potatoes, and this is a trigger, your normal state is a state of pain and you don't even recognize it's abnormal.

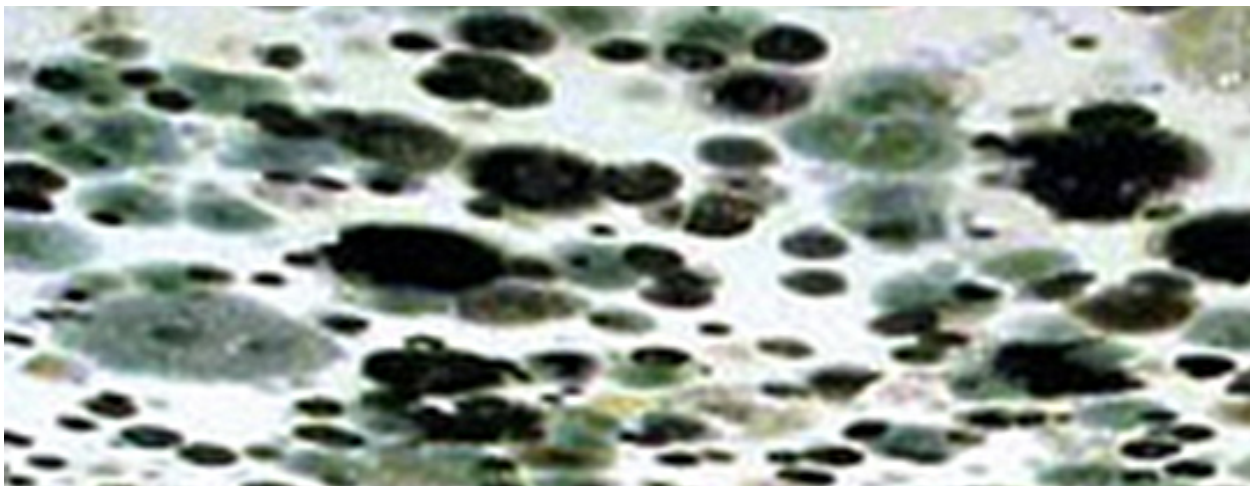
S: Oh, wow!

D: I never knew as a kid. You were supposed to be able to walk around without it hurting. I've had flat feet. I've had three knee surgeries in my early 20's and I just really genuinely thought that it was always supposed to hurt. When I finally got orthotics that worked, around 20-22 or whatever, I was like, wow! I just walked across campus and nothing hurt! I was just blown away. It never occurred to me that walking was supposed to be a pain-free activity. You're normal but you may be colorblind and you don't know you're

colorblind until someone shows you. What I would propose is that, everyone listening to this is performance-blind. You don't know the level of performance that you're capable of because you run it at your current level and if you've dramatically lost some performance, you'll notice that. If you were fine last year and you moved into a new apartment that might have had some water damage and all of the sudden, you can't think like you used to, you don't wake up feeling good, and all these weird things are going on-yeah, you're getting damaged from your environment. You've got basic environmental poisoning the way I've had several times in my life. This is a huge problem. I filmed a documentary about it with a real film crew.

S: Right, I've seen that. It's a great documentary!

D: I think, half of buildings, at least, have this problem. I see this in high performers all the time. They come to me like, "Well, I do really well. I'm running a company but last couple of years, things just aren't the same," and I'm like, "Did you move two years ago?" "Yes." "Tell me about your house." They have an environmental input that's taking away their energy and they don't know it, right? But they notice that something has changed at least. If it's really dramatic like I was fine and then all of a sudden, I'm not fine, I know something's wrong but no doctor can help me. It's because the doctors aren't necessarily trained to look in the environment for something like that, especially when you have two people in the same room and they respond differently. One of my favorite stories from Moldy: The Documentary is that, there's a husband-and-wife couple who are both physicians, practicing physicians, and they move into a multi-house. Her life goes to hell and he's fine. They're trained as doctors. If someone has more than ten symptoms, they're always a hypochondriac. No one gets ten symptoms at the same time so she believes she's a hypochondriac, except her temperature is one degree higher than it should be-therefore, it's real. She biopsies every organ in her body, which is terribly painful and doesn't find anything. After three years of hell, she figures out, oh, it's environmental mold, and the whole time, her husband is going, "I don't feel anything but I know it's real and I can see it in my wife." She was taking the hits. Mold in your environment



like that increases your cancer risk and it damages your mitochondria but he didn't get the systemic

information that she got. Twenty-eight percent of the population has her genes, the other 72% of the population doesn't have them. They still are at risk but they don't have the same the same set of inflammatory things. We're not all the same but understanding that these are the things that universally make people weak and these are things that make lots of people weak so you know the list and you can sort them out. That transforms your life because you can now navigate what used to be just a sea of randomness like, oh, there's a cluster of risk over there, let me see if it hurts when I walk into it. That's biohacking.

S: Got it! And so, there are so many different environmental toxins that we could be exposed to, black mold being one of them, but there's, for example, chemtrails-there's some controversy about that, if that is even a thing to be worried about; there's artificial sweeteners that are in pretty much everything like aspartame, saccharin, sucralose, and etcetera, some of them can be damaging to you; just so many additives in our foods, especially when we're talking about packaged foods. It's just scary! What do you recommend to not be overwhelmed by all of this and just kind of throw your hands up in the air?

D: I'm pretty sure the chemtrails are made out of aspartame! Here's the thing, if you go back however many thousands of years of history we can effectively look at, there have always been environmental toxins-there just weren't as many as there are now. The first thing to break yourself of is this belief that, I'm going to get all of my nutrients from my food. Well, the corollary to that is: If you're going to get all your nutrients from your food then you should get all of your toxins from Mother Nature. There's just one little problem. Mother Nature makes way more aggressive toxins than she used to and that's because of what we've done to our soil with some of the aggressive farming practices with glyphosate and things like that so even the food itself is more aggressive, bacteria and fungus are more aggressive, and then there's all these man-made toxins that you're getting. You should just recognize that you're going to be exposed to toxins and if you weren't exposed to any toxins ever, you'd probably be weak because some of these so-called toxins actually make you stronger. The mold toxins? They have no hormesis effect or no hermetic effect, which means, you don't get stronger because they just make you weak. Some toxins like caffeine or the polyphenols in coffee and blueberries actually are toxic but they cause a really healthy response so you actually want to get more of those because they make the cells in your body get stronger. It's not even to say, oh, all toxins are bad, but you can't say that certain classes of toxins, at any level, are not beneficial. That, you can probably survive a certain level but it's not going to help you perform at your best. What you want to do then is aim your behavior consciously to things that have less of the most harmful toxins and recognize that there will be times when you get exposed to toxins. When you do that, know how your body's detox pathways work so that you can accelerate them. I fly. I'm traveling. I'm on the road, probably, 120 days out of the year. Airplanes are hellishly toxic. They're full of ionizing radiation that really does affect the way the mitochondria in your body works. The air is bad; there's not enough oxygen; you're not electrically-grounded; they spray plasticizers, pesticides, and flame retardants; and God knows, what kind of perfume that person next to you is wearing, and then they try and feed you like bags of I don't even

know what's in those little bags, because I have not had one in ten years but it's bag of stuff that I would not give my dog. My dog is on a raw grass-fed diet with some brain octane on top so that's a different animal. I mean, if I was going to live in this kind of paranoid sense of things, when I'm home, my freezer is full of a cow that ate grass from the front pastures. I live in an organic farm. I look out the window right now and I'm looking at the garden where I grow all the food my family needs. It's all organic, permaculture, and some of it is biodynamic. I could just build a bubble here and just live here but the problem is, no one's going to do that and if you set yourself up with those expectations, all you do is you create stress and fear. What you've done is, instead of focusing on that foundational biology thing, you've now allowed your software in your head to go haywire, which increase your stress response, which actually damages your hardware. The bottom line is: Yeah, sometimes I fly. Sometimes I eat things that I don't really want to eat. I don't fast before I'll eat things that are really bad for me but there are times when I'm like, you know, I'm going to do that and I know it's probably going to cause inflammation but I'm really going to enjoy that red wine because it's older than I am and I'm going to take some of my activated charcoal and I'm going to take some of the Glutathione Force, which are some of the other supplements that I manufacture now that actually affect your detox pathways. I might not feel great but I know how to control my biology so that I feel good and hell, I eat fish! There might be radioactive stuff from Fukushima in there-there's a whole class of people who are terrified of that-and I looked into that and there's about 2-4% increase in the radioactive stuff there, I take astaxanthin, which tends to help modulate that. Apparently, being in a state of ketosis is a very powerful protection. If you look at the Bulletproof Radio show I did with Dr. Veech, one of the top scientists out there, we are constantly in a state of fight against aging and against being decrepit so whether or not, we're in the modern world or an old world, you would be breathing in coal dust a hundred years ago and kerosene oil things and you would have had degenerative diseases. These happen. What we recognize now is that, we know some of the things that are triggers and we can just minimize but not eliminate them. When you accept minimization instead of absolute zero, what you end up realizing as well if aging, death, and weakness is death by a thousand cuts, well, I'm only going to have 500 cuts so I'm going to live twice as long. That's what I'm doing. My goal, literally, is 180 years old.

S: Wow! That's pretty impressive. I'm going to hope for you to reach that goal. You mentioned that we get varying responses to these environmental toxins and so, what sort of tests would you recommend for folks to take to see what their propensity is to disease or to being susceptible to some response? Is there a genetic test that you recommend, which people do?

D: Well, I recommend a basic inflammation test. If you were to do this, what you do is, you get a test of your hormone levels and your cardio risk factors but not just cholesterol. Cholesterol isn't that terminally important, we're finding out but it's useful to know it. The big thing is, what's your CRP look like? A C-reactive protein is a sign of whether or not your system is inflamed or not. Your C-reactive protein, if you're working out two hours a day every day even if you're eating perfectly, you're going to have

excessive inflammation in the body so you look for that. Then, you look at something called homocysteine, which is another marker of inflammation and you'll get something called Lp-PLA2. To get those three things, and they're all where you want him to be, is a pretty good sign that you've done something in your environment so that your inflammation levels are under control. If your inflammation levels are off, that is your first sign that you've really got to start changing what you do, what you eat, how you sleep, or removing some toxins from your environment. Those are the big warning signs. There are lots of other things you can do. You can get a full nutrient workout. You can do 23AndMe test, which is about \$99 to get your genes and you can run those through an analytical system and with that data, you can determine your methylation pathways. A very good number of people have some genes that mean that they're not good at breaking down certain vitamins. For instance, roughly somewhere around a third of people cannot process folic acid so our government requires that folic acid be added to white bread and things like that. Well, for me, I'm just one of those genetic, lucky people who is sensitive to mold and doesn't methylate very well. When I get folic acid, it builds up and it actually can reach toxic levels and cause inflammation. When you get folic acid, you might be able to use it but we don't know. We can both use something called folinic acid or if I have MTHFR, those are basically the methylated forms of these vitamins and you're not going to know that unless you do this test. I recommend most people, when you get around to it, do your 23AndMe because it's interesting to get your genetic work out and you can run it through a website called Genetic Genie, and there are several others who can tell you whether you have



these methylation problems and if so, there might be a specific form of Vitamin B12 you should take or maybe you should avoid eating certain kinds of foods because they have a kind of sulfur you don't absorb. Knowing that is kind of cool-and you may do it and be like, I have totally normal pathways, great! You are more resilient and you need a wider variety of foods than many of the people sitting next to you.

S: Yup! And where would you get the inflammation test form? Do you just go to the doctor and say, "I want my C-reactive protein and homocysteine and so forth tested?"

D: You can do that and what they probably say is, "I'll just get your cholesterol test," and you have to say, "No, cholesterol isn't a very good marker for the kind of risk I'm looking at." Inflammation trumps cholesterol. In fact, cholesterol is a terrible way to tell if you're going to get a heart attack or not, given that half of people who get heart attacks don't have high cholesterol.

S: Got it! In fact, I've heard that sugar is really the culprit in inflammation more than anything and that cholesterol is good for you because it's something that is essential for your brain to have. We've been demonizing that wrongly instead of demonizing sugar, which is what we should have been.

D: I would argue that unoxidized cholesterol is really good for you until you hit a very absurdly high limit. If you would read The Bulletproof Diet, I go into that in a lot of detail because Bulletproof coffee has grass-fed butter in it—Oh my God, there's cholesterol in that but it turns out cholesterol is the substrate for most of the hormones in your body. Your brain is full of cholesterol and when cholesterol is damaged or when you have an inflammation, you start having problems but the presence of cholesterol itself actually makes you put on muscle faster, it makes you more resilient to certain environmental toxins, and it's not necessarily a bad thing. In fact, low cholesterol like these under 200 down at the 170's where some of the new recommendations are, it actually makes you weak and I think that the older levels, which is 220, are much more appropriate for most people but it also depends what kind of cholesterol. However, the whole point is we measure cholesterol because it was one of the first things you could measure. You can see cholesterol—it's this fatty substance in blood so back in 1950 when they were trying to figure out how to measure and monitor things, that was what they did. It's simply not that big of a deal. It's just because we focus so much research on it that we've really been trying to make it matter. It matters somewhat but it's a small thing and it's not anything to prevent inflammation. Inflammation will kill you and it will grind you down and cholesterol will not.

S: Mm-hmm. And do you reduce the amount of sugar that you take in or...?

D: The Bulletproof Diet is a very, very low sugar diet especially fructose, which is one of the most damaging sugars—even fructose from fruit. So many people think fruit and vegetable is actually like one word that just runs together like they do in German—well, fruit is candy. It's water, sugar, and trace amounts of vitamins and fiber. Broccoli is actually mostly fiber and things that gut bacteria can eat and some vitamins, so they're very different. The Bulletproof Diet has lots of vegetables, limited fruit, and you have the fruit around dinner time, if you're going to do that. You want to be hungry and tired then have fruit for breakfast. It will make you hungry at 10-10:30 in the morning, the bagel will call out to you so I recommend avoiding sugar, including natural sources of sugar like fruit and especially, white processed sugar, and focusing on eating lots of the right kinds of fat, moderate amounts of very high quality

protein, and tons and tons of vegetables. When you do that, you see changes in your conscious and it's like your brain works way better. Your cravings also go away. Sugar is tied to heart attacks in a very direct way. Sugar reduces your immune function, it feeds fungal infections in the body and yeast infections, and it's just bad news. The amount of sugar that people get even when they're doing things like coconut water, it has 8-10 grams! You want to do less than 20 to 25 grams max and that should really be it. There's a little bit of sugar in cashews so you're eating some cashews, you might get a gram or two of sugar. You're eating even some vegetables, well, there's trace amounts of sugar in those, which is not

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a big deal, but adding two teaspoons of sugar in your coffee-that's actually just a bad idea in general because it's going to make you hungry later. You might get a short boost from it but it doesn't make you more resilient, it doesn't make you stronger, and it's just something we've been doing for a long time because sugar is crazily abundant.

S: Yeah, but if you're going to eat a protein bar to get an energy boost or you've done a workout at the gym and now, you want to get some protein and you do the easy route and you get a protein bar, which has five grams of sugar-you're saying that it is like, a fifth of your total sugar intake for the

whole day and probably not a great idea?

D: It's not a good idea but here's the thing, even if you were to get four grams of sugar that's in your vegetables, five grams, even ten grams, I'm proposing that your net carbs for the day-on days when you want to be in ketosis or in fat-burning state that you should be in some of the time, at least mildly-you might want to do a day or two where you're at 50 grams of carbs. You're talking about a pretty limited number there but for a lot of people, they're going to do these things that I call, The Bulletproof Sources of Starch. White rice is not zero carb by a longshot as well as butternut squash and sweet potatoes but is grain-free, and grains have a lot of antinutrients that you don't want as well as a lot of molds, glyphosate, and things like that so what you end up doing is, you're end up saying, all right, I'm not always on a low-carbohydrate diet but some of the times, I restrict my carbs and I always restrict my sugar, and when you do that, the body operates differently.

S: Yup. And you mentioned ketosis so for folks who are listening and don't know what that is-I mean, I have a master's in biochemistry so I know what it is-but for our listeners, could you do a brief explanation?

D: Sure!

S: Because it's fat-burning mode but how so?

D: Our history as scientists has led us to believe that we mostly burn glucose-we burn sugar-and your body will preferentially burn sugar or carbohydrates. There is a state though that most meditative traditions know about where you fast for several days and when your body has no more sugar stored in your tissues, the body will start to burn fat for energy. When it does that, it uses an alternate energy creation pathway that almost all the cells in the body have and this is called ketosis. It makes energy directly from fat, which is why you can call it fat-burning mode. The interesting thing is, that some parts of your brain like energy from fat more than they like energy from sugar so by restricting the amount of carbohydrate you eat, restricting the amount of protein you eat, having tons of fats, and lots of low-sugar vegetables, you end up suddenly going into this state and it's very interesting because you lose weight, it's profoundly anti-inflammatory, and you feel amazing. You lose your food cravings but you have a kind of mental sharpness that you've probably only experienced if you've gone and fast for several days at a meditation retreat. What I do with Bulletproof coffee is, I use an oil called Brain Octane Oil, which I manufacture, that is a shortcut to ketosis. It will give you a mild state of ketosis within a half hour of drinking your Bulletproof coffee. You can measure the difference on a little finger stick test to measure whether you're burning ketones or not so I'm cheating. Every morning, I put myself into miles ahead of ketosis, which has effects on inflammation, has effects on the brain, feels amazing, and I don't care about food. One of the neat things about ketosis that was only recently discovered is that one of the reasons fat people stay fat is they lose weight and it comes back on. When I weighed 300-pounds, I said I lost a hundred pounds of fat but I probably lost 200-300 pounds of fat because if you lose 10 pounds, you gain 20. You lose 20 pounds, you gain 30. It's a constant battle and every fat person knows this. They have fat pants in the back of the closet because granted, I can fit into these pants today, but next week, I probably won't. One of the big reasons this happens is that, there's a hormone in your body called ghrelin, and when you're fat and you lose a lot of weight, if you're not going to ketosis, you will have the ghrelin levels of a fat person. Now, you weigh say, 150 pounds but you used to weigh 200 pounds, ghrelin is a hunger hormone, you'll have the hunger levels of a 200-pounder even though you weigh 150 pounds. You'll eventually weigh 220 pounds because we're going to keep eating for that ghrelin level. A mild steady state of ketosis recess your ghrelin levels so all of a sudden, your body weight matches your growing level, and your hunger matches your current weight instead of your old fat weight. That's kind of powerful so the only way you can do this is by going on fasting for a couple of days until you go into a state of ketosis or you can cheat and have a little bit of things that add ketones externally like Brain Octane in your

Bulletproof coffee.

S: Right, and you said that that's, basically, your breakfast. You skip breakfast, have Bulletproof coffee, and then your first meal of the day is lunch.

D: That protocol is called Bulletproof Intermittent Fasting. It turns out, if you don't eat anything for 16 or 18 hours out of the day, you still eat a normal amount of calories, you just have lunch and dinner. That's a very powerful way to turn off inflammation and to lose weight for some people, especially men. Some women love it and some women don't do so well. The problem is that, men and women, when they're intermittent fasting, they tend to get really hungry around 11 in the morning so, you had dinner, you went to bed, you woke up, you skip breakfast, and by mid-morning, you're like, okay, it's time I eat, but it's in the middle of your workday, you're supposed to be having meetings but instead you're yelling at people because you start feeling crappy. It turns out intermittent fasting is hard to do while supporting a family, a job, and an active life. Bulletproof Intermittent Fasting is this idea that in the morning, you'll have no protein and no sugar at all—just these fats that increase your ketones above what they would do from fasting. All of a sudden, when 10 or 11 in the morning rolls around, you're like, oh yeah, I feel great! We're recording this now, it's noon, this morning I had Bulletproof coffee for breakfast, I had about two tablespoons of brain octane and a tablespoon of butter in it, I drink that, and that those three tablespoons of fat was all I had but I am not hungry in the slightest so I could wait until dinner if I needed to. I'll probably have some lunch because I don't want to do an extended fast today but the fact is, I'm not ravenous. I'm not craving and I'm not even hungry. That's kind of liberating and that's the Bulletproof Intermittent Fasting thing. Other people will do it and I recommend this for women, in particular: You make the Bulletproof coffee, which is profoundly satiating but you add the upgraded collagen to it, which is a grass-fed collagen protein. We don't eat collagen in our normal Western diets anymore—you get it from boiling bones mostly or gelatin. This collagen is a building block for your bones, your tissues, your hair, and your skin so it allows more moisture to be stored in your cell and you can have better electron flow. I get collagen in my Bulletproof coffee some of the time but that's a breakfast with protein and fat or just fat but not protein, fat, and a giant ball of bananas with sweetened yogurt. Don't have sugar in the morning. You'll just be hungry all day long and it's just a bad idea to do that.

S: Yeah. Intermittent fasting is also a strategy for longevity so a lot of the folks who are focused on extreme life extension, they're doing intermittent fasting, caloric restriction, and so forth.

D: The caloric restriction appears to not work in humans. They're looking at that. There are some really positive genetic expression changes that come from caloric restriction. Going back to the 80's, there was some mouse studies where people say, "Okay, the mice live a lot longer when you restrict the amount of energy," so a few people, some of whom I hang out with, have done that for years and they're kind of stick

thin and a little bit cold and like, “Well, once you learn to manage it...” I’m not convinced at that. I’m not convinced that that’s a proven strategy but the genetic changes in information that happen from that are way cool. There are three ways you can get those genetic changes. One of those is intermittent fasting as opposed to just caloric restriction causes some of them. A diabetes drug that’s well known called Metformin, will also cause most of those changes. I’ve used Metformin for actually about five or six years for anti-aging purposes. It helps that I’ve run an anti-aging research nonprofit group called The Silicon Valley Health Institute for more than a decade where I’ve had a chance to meet all these researchers and

“It’s really hard to get a source of collagen in the diet.”

now, you can actually get supplements that cause the genetic expression changes that you would get from starving yourself without starving yourself. That’s what I tend to take.

S: Very cool! You mentioned collagen and I’m vegetarian so we have the collagen powder from Bulletproof and my fiancée takes it. She’s not vegetarian though but I don’t take it. What do you recommend for a vegetarian as an alternative?

D: It’s really hard to get a source of collagen in the diet. Your body can build collagen by any of the amino acids: lysine, proline, and vitamin C, as well as working metabolic pathways so you are at a little bit of a disadvantage there. There are some people who are vegetarian but sort of make an exception because there isn’t a good vegetable collagen out there—it’s just not possible. You can get the building blocks for collagen and but then, in order to build the collagen—and this is actually something that happened to me.—I have stretchmarks. I’ve had them since I was 16. I’ve got them on my biceps, my shoulders, all over my abdomen, and my legs. I kind of look like a zebra when I take my clothes off even though I’m a zebra who has a six-pack, which is kind of cool. That happens because, in part, of collagen formation so if your body is exposed to toxins like mine was living in a basement with black mold, your body will preferentially steal vitamin C from your diet and will put the vitamin C into the liver to make us a compound called glutathione. I manufacture glutathione supplement and I take it every day—almost every day. Glutathione is the master antioxidant and also the main detoxifier in your liver. When you take Tylenol or when you drink alcohol, it depletes your glutathione. When you’re exposed to toxins, that depletes your glutathione. What your body does is, it says, well, protecting my liver is more important than having good skin and having proper collagen and tissues so I’m going to take the vitamin C and I’m going to give it to the liver, which means I won’t have enough vitamin C to form proper collagen, which means I’m going to have weaker skin, weaker joints, and weaker connective tissues. It’s not possible to eat masses of butter as a vegetarian and lots of egg yolks, right?

“I manufacture glutathione supplement and I take it every day—almost every day. Glutathione is the master antioxidant and also the main detoxifier in your liver”

Then the question comes down to: What are you going to do about having healthier connective tissue? You can take things like silica that help a little bit but it's actually quite hard to do. I don't have a good answer to say what to do there other than if you're a vegetarian who's willing to have leather seats in your car, we're using skins of animals that would have gone to tennis shoes and we're turning them from grass-fed animals into a really important nutritional supplement and by doing that, we are contributing to the health of the soil because you have cattle that are allowed to graze-these, they are South American cattle that actually graze, instead of eating genetically-modified grass. What you're doing is kind of part of the ecosystem and this is something that would have gone to waste but now, we're turning it into a really precious collagen peptide. If it's an ethical thing versus something else, there is room for a supplement like this in the ethical universe depending on whether there's religious aspects to it or what the other reasons for it are. There are quite a few people-I was a raw vegan for a while and I'm totally down with that. A lot of people find joint pain goes down, tissue hydration goes up when they add collagen and those can be bigger problems for vegetarians than not.

S: There are two last things that I want to ask you about and I know we're about out of time so maybe just a quick explanation and then refer our listeners to a resource so that they can find out more about it. Those two things are: 40 Years of Zen and The Better Baby Book.

D: Awesome! Well, let's see, Better Baby Book is available on Amazon. This is the first book that my wife and I wrote. I did a lot of the writing, she's done a lot of the eating, and I did most of the cooking. When I met her, she was a physician, and she was infertile and we want to have kids-she was 35. We changed our diet. There was 1,300 references that went into this and what we achieved was two healthy children without fertility assistance-one at age 39 and one at age 42, and this is from someone who had PCOS and could not have babies. Pretty remarkable! Today, I talked to Lana who does a fertility coaching practice online over Skype for global clients and has astounding success rate, where she likes to say that she's gotten more people pregnant than I have, which is kind of funny.

S: That is awesome!

D: She gets emails and last week she got four emails from clients saying, "Oh my God! I'm pregnant!" That's cool! So, this is a set of knowledge and it's kind of a precursor to the Bulletproof Diet. It turns out fertile animals are high-performing animals. Your body will optimize to reproduce-that's one of the most important things that you can do from an evolutionary perspective so when you can't reproduce and you're at reproductive age, it means something is broken. By restoring fertility, you also increase your state of high-performance. The other thing we didn't get into too much in this interview is around changing the software by reprogramming your biological fear response-this fight-or-flight response that we have. I spent ten weeks of my life with electrodes glued to my head reprogramming my nervous system, learning

all the forms of self-deception that I have-that we all have-and then, reprogramming them. It's meant to replicate the brain state that you get from about 20-40 years of daily Zen practice. It's just hard to do that because you don't know if you're doing your dailies and practice right so what you end up with is a long, meandering path. When you're doing your meditation with, basically, rubber bumpers and buzzers every time you meditate wrong, which is what it's like when the computer sector had. You can cause profound changes in your brain-functioning and your level of awareness that just kind of change everything about your life. It changes your physical connection with your body. It also changes your emotional and psychological connection and just your ability to be aware of what's happening and to execute and do the things you want to do instead of just getting your own way trying to do what you do. People can find out more at 40YearsofZen.com. You have to apply to go to the program-it's quite expensive and I apologize for that but it's got a team of neuroscientists working on your head and it makes just a giant difference in how you think and how you feel.

S: Right. It's like, \$15,000, I think, from memory.

D: It is. I'm working really hard on bringing that cost down but right now-custom hardware, custom software, dedicated facility, and a team of neuroscientists and technicians working on your head-but, hey! I've done it ten times for a reason. It absolutely changed everything about who I am and what I'm capable of doing.

S: Yeah, it's definitely on my wish list. All right, so we're out of time. I know you have to go. This is amazing. There was so much more that I wanted to go into-sleep hacks, your morning ritual, your office environment, standing desk, and the different supplements that you take. I want to mention also to our listeners that Unfair Advantage is a really great-would you call it a supplement?

D: Yeah, it's technically a supplement. It's mini-shots, you turn the top off and you drink it. It's something that we synthesized from scratch. It's a compound. You can buy it from Mitsubishi Chemical and that's what most supplement companies do but we found that that form doesn't absorb well into the body so we synthesized our own colloidal acid-based form and you take it. When you can get this compound into your cells, in different studies with animals and whatnot, it will increase the efficiency of your mitochondria so you can make more energy with the mitochondria in your cells for about six hours. You'll have the most mitochondria in the front of your brain and the second most in your hearts so you really can feel a difference from the stuff and if you take on a regular basis, it triggers the body to grow new mitochondria, which is a really important anti-aging strategy. For me, I do four Unfair Advantage ampules a day and it makes just a giant difference in how I feel and how I perform. Before I did the show, I took an Unfair Advantage so that my brain be firing at full capacity.

S: Yeah. I love it! I've got Unfair Advantage in my fridge and I recommend it to our listeners. Also, the Brain Octane is great. I've got that sitting here on the counter in the kitchen. Just great products! Go check it out at Bulletproof.com for the online catalog. Any additional resources you want to leave our listeners with or ways that they could work with your company to optimize their performance and their biology?

D: Well, check out Bulletproof.com. There's a subscription program and we'll send you Bulletproof coffee. We didn't talk about the beans but the coffee beans are free of one of these mitochondrial-inhibiting toxins that's really common in coffee. You're getting coffee-if you live in North America, there are no standards for these toxins in coffee but Japan, China, and Europe have all standards so when coffee is too dirty to sell there, they send it here and then we drink it. Two hours after we drink it, we can feel jittery, anxiety, you just get a crash, and you get sugar cravings. When you get coffee without these toxins in it, you're certainly not doing yourself any harm. I feel profoundly different on my coffee beans so get a subscription for Bulletproof coffee beans and brain octane oil and start doing that in the morning. When you subscribe, you can save some money and you just know that it's going to arrive so you've always got some collagen protein, you've always got supplements, you save money, and it's just kind of automated. Every single morning for the past ten years, I've been doing this and it will profoundly change you. If you were to only get one thing, start with Brain Octane and see what that does-it's a game changer!

S: Yeah, awesome! Thank you again, Dave! This was incredible content. Everybody, you need to subscribe to his podcast-Bulletproof Radio. Go to bulletproofexec.com, the Bulletproof Executive for blog posts about all the sort of stuff we've been talking about and a lot of things that we didn't get to like the sleep hacks, the standing desk office, optimizations for your health, other supplements, and all sorts of great stuff, including apps and various resources. All right, so thank you again, Dave! Thank you listeners! Be sure to go to the OptimizedGeek.com for the transcript of this episode, show notes with all links from everything we've mentioned in the episode, as well as a checklist that you can get along with the transcript as a nicely-formatted PDF. All right, will catch you on the next episode! This is Stephan Spencer, signing off.

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STEPHAN SPENCER BIO:

[Stephan Spencer](#) is an internationally recognized SEO expert and bestselling author. He is the co-author of [The Art of SEO](#) (3rd edition - August 2015), author of [Google Power Search](#) and co-author of [Social eCommerce](#), all published by O'Reilly. Stephan founded Netconcepts, an SEO and interactive agency in the 1990's, and sold it to Covario in 2010. He invented a pay-for-performance SEO technology called GravityStream that was also acquired and is now part of Rio SEO. Stephan's recent SEO clients have included such retail giants as Zappos, Sony Store, Quiksilver, Best Buy Canada, Bed Bath & Beyond, and Chanel. Stephan has spoken at countless hundreds of Internet marketing events, including all the major search & e-commerce conferences (SES, SMX, PubCon, Internet Retailer, Shop.org, eTail, etc.). He's been a contributor to the Huffington Post, Multichannel Merchant, Practical Ecommerce, Search Engine Land, DM News and MarketingProfs, to name a few.

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