



Episode 241: Biohacking for Moms, Anti-Aging & Raising Amazing Kids With Ben Greenfield

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Katie: Hello and welcome to the "Wellness Mama" podcast. I'm Katie from [wellnessmama.com](http://wellnessmama.com). And today, I'm joined by my friend, Ben Greenfield. He's a dear personal friend and a prominent voice in the health world. I'm gonna brag on him for just a minute so you know just how qualified and wicked smart he is, and probably because he won't share all of this himself.

He is a life-long complete nerd, which I can say because I'm one too. He graduated high school at 15, started college at 16. He studied anatomy, physiology, biomechanics, pharmaceuticals, microbiology, biochemistry, and nutrition, eventually rising to the top of his class, completing an internship at Duke and the National Football League, and graduating in 2004 at 20 years old as the top senior in his class.

He was then accepted into six medical schools, but opted instead to get a master's degree in exercise physiology, and biomechanics, after which he left hardcore into the fitness world, partnering with doctors and opening a series of gyms, personal training studios, and labs across the country. He was voted America's top personal trainer in 2008.

Then he became the father of twin sons, which I think he would consider one of his most important jobs and pivoted into media writing, speaking, ad consulting, launching one of the world's first fitness podcast, which I highly recommend, becoming a New York Times bestselling author of "Beyond Training," and 13 other books, designing and creating the "Christian Gratitude Journal," and starting a blog that now reaches millions each month.

He also, you know, in his free time, a professional obstacle course racer completing the coveted Spartan Delta, along with training with navy seals and many other feats across the country. Recently, also the founder of Kion

that now creates step by step solutions from supplements and fitness gear, to coaching and consulting for the world's hard charging, high achievers to achieve a truly limitless life.

And he also shares my focus on one of the most important things in life, which is raising exceptional children who can improve our world and which I've seen in person in his amazing home where he lives with his wife, Jessa, who is equally amazing, and their twin boys. So today, we're going to delve into biohacking, anti-aging, and raising amazing kids. Welcome, Ben. And thanks for being here.

Ben: Wow. What an intro. That was exhausting to listen to.

Katie: Well, you did it all. I could only imagine how you exhausting it was to do. So there's so much I wanna talk to you about. But to start, I wanna get an update. I do this every time I talk to you on a topic we share a passion for, which is biohacking or the using science and technology to make life better. So what are the latest and greatest ways that you are staying healthy in the newest biohacking things you're researching?

Ben: Well, let me let me issue a caveat before I tell you. And that is that, by no means, think that you need to spend thousands of dollars on fancy medical technologies and self-upgrades to be healthy or to increase your lifespan. There's plenty to be had for free such as getting outside barefoot, or taking a cold shower, or drinking good, clean pure water that you add some minerals to, or getting your daily dose of sunshine, making sure you have all the relationships in your life just setup as well as you possibly can, and you've got love and happiness and purpose pouring into your life all day long.

Provided that you've taken care of that natural ancestral easy and simple approach to optimizing your wellness, then, yeah, I mean, there are some pretty cool things you can do to take yourself to the next level. Let me think of a few that I've got, that I've been doing lately. Actually, one was this morning. You know, I travel a lot, a lot. And so in many cases, I need to work on my circadian rhythm, and removing inflammation from my body, and also improving the health of my mitochondria. And one of the ways that I do that when I'm sipping my morning coffee, what I'm doing now, and this sounds a little bit laborious point is, like, two minutes when I walk into my office to set up is I have one of these infrared light panels that produces red light and near infrared light.

Now, I use one made by this company called Joovv, and I have two of them, one behind me and then one slightly shorter one in front of me. So I'm kind of sandwiched in between these two light panels while I'm sipping my coffee, and reading through research, and checking some emails, and things like that, and I flip these things on, so my body is just bathed in red and infrared light. That activates something called cytochrome c oxidase in your mitochondria. So it just turns on your body and increases your nitric oxide production, too. So you kinda get that effect that's like Viagra for your whole body.

And then what I do is I have a little in-ear-like device called a HumanCharger. And also an eye device called the Re-Timer. And the HumanCharger makes kinda like a white light that blast the photoreceptors in your ears to realign your circadian rhythm. And it's also very good for seasonal affective disorder. You know, I live out in

the middle of the forest and I'm looking out the window right now, you know, it's foggy or on like a north-facing slope. We only get sun from 10:00 to 2:00, you know, sometimes less than that in the winter. So, you know, that's important, too, to kinda simulate the sunshine in my ears. And then these glasses I wear, they're called Re-Timers. And those produce light from what's called the greenish blue wave spectrum, which is very...it's not very harsh on your retina. So as compared to, like, these bright blue light boxes that you'll get on Amazon, for example, for seasonal affective disorder.

And finally, for the cherry on top of the cupcake, I put on a device that was originally designed to control or to really improve cognition and dimension Alzheimer's patients, but also to do things like enhance your ability to be able to enter a meditative state, shut down inflammation in neural tissue, and increase the mitochondrial activity and nitric oxide production in your brain. And that's called a Vielight, V-I-E-light.

And so essentially, I am blasting my entire body for 20 minutes with as many therapeutic spectrums of light as possible. And you finish that up and you just feel like your whole body has been cleared. It's like a cup of coffee for your whole body, which of course if you're sipping coffee as well, you're getting a double whammy effect. So in review, it's two Joovv lights, one behind me, one in front of me, the in-ear charger in my ears, the glasses on my head, and the Vielight on top of my skull. And man, that sounds kind of silly but it's a great way to kinda wake up and start the day.

And man oh man... Let's say, for example, you've been traveling a lot, you've been traveling we'll say back east, and then you travel back west, and you've been waking up in the east at 7:00 a.m., but now you're back home and say, California, and gosh, darn it, now, you're waking up at 4:00 a.m. and it annoys you because you're still in east time, what you do is when you wake up at 4:00 a.m., just kinda keep yourself in bed or get up and do whatever you're going to do, but put on some blue light blocking glasses so that your body is not getting any light signals at all. And try and stay away from screens and try to keep the lights dim in your home as much as possible.

And as soon as the time rolls around that you actually do want to wake up, you know, this is called retiming your circadian rhythm, at that point, you blast yourself with light, you know? And of course, as I alluded to earlier, you can certainly feel in Florida just get out in the sunshine and go for a walk. You don't have to, you know, spend 2,000 bucks on all these light devices but it works very well for kinda realigning your circadian rhythm. So I realized, I've only just given you one example. But I'll stop there so I'm not droning on for too long.

Katie: No, I think that's such an important one and a great reminder that if you live in a sunny climate or during the summer, that's a completely free one that most of us don't remember to take advantage of often enough. I'm a big fan of the Joovv as well and I use it daily. And I know a lot of listeners have tried it as well. But for people who aren't familiar or more often I hear from people who kind of doubt that light can have such a dramatic impact on the body, can you talk us through a little especially the Joovv, the photobiomodulation, that red light, what it's actually doing in ourselves?

Ben: Certainly. And if you would like to take a deep dive into some of the better papers on this, look up the work of Dr. Michael Hamblan, H-A-M-B-L-A-N. He probably has the largest body of research currently on photobiomodulation that I know of. And what's occurring is when this spectrum of light...typically, the spectrum of about...it should be somewhere around 700 to I believe it tops off around 850, what's called a nanometers for your wavelength of light. What occurs is, A, there is increased activity in response to the light photons of something called cytochrome c oxidase, which is a component of your mitochondria and it increases mitochondrial activity. So you get increased aerobic respiration, increased production of ATP, more oxygen and nutrients delivered to tissue.

And then when it works on the skin level, you get an increase in the activity of cells responsible for collagen, so you get better elastin and fibrin activity, or formation lay down on, like, skin, areas of scar tissue, etc. It can also act to increase thyroid activity if you have the light placed about six inches or so from your thyroid gland. It can work, like I mentioned, too, because you're opening up...your blood vessels actually have photoreceptors on the actual surface of the blood vessel, and these can respond to light and vasodilate by producing nitric oxide. So there's a blood pressure lowering effect and also an increase in cardiovascular health overall due to that release of nitric oxide, which like I said earlier, you know, I like to think of it like Viagra for your whole body.

And then when it comes to the neural effect, there's a real increase in cerebral blood flow which is probably one of the reasons that the one that I mentioned, the Vielight, is so effective for, like, you know, Alzheimer's, or dementia patients, or you know, when your brain is a little foggy, that type of thing. And there's also some research that shows that, and this is why I take my clothing off when I stand in front of these light, I do it naked, because when those wavelengths hit the testes, there are cells in the testes called Leydig cells. And those cells have mitochondria too. And so this can increase sperm production and also spark and increase in testosterone production.

And many men who I work with and a lot of guys will use this type of strategy as a natural way to increase testosterone. I mean, there's research going all the way back to the '40s with sunlight exposure on the gonads showing increase testosterone. The little fellows respond pretty well to wavelengths of light. And so there's kind of a libido or testosterone enhancing effect as well. But, you know, there's a lot more but those are a few of the biggies.

And again Michael Hamblan's research, some of the articles on the on the Joovv website admittedly when you go to the website of someone who manufacturers light devices, you always need to look at things with a weary eyes, you know? They're always gonna be slightly biased. I mean, the term you'd want to look up in addition to Dr. Michael Hamblan if you're to do like a Google Scholar Search for this or wanna get more research would be photobiomodulation, photobiomodulation, also abbreviated PBM. And there's plenty of data out there that you can find that's unbiased in terms of studies on this.

Katie: Yeah, for sure. And it's important that you mentioned the testosterone because the most recent stats I've seen are that men of the current generation have, I believe, a third of the testosterone that their grandfathers did. So we've seen like a really drastic reduction in this at only a couple of generations. And anytime, there's that big of a decline in anything, it always makes me really curious what's going on. I'm so

grateful there are things like this or just different lifestyle interventions that we could do that help men to recover that, and women also seeing lower testosterone. But do you have any idea or theory of why we're seeing such a decline in testosterone, and how guys can combat that?

Ben: Yeah. Well, the problem is you're seeing a decline in both total testosterone and free testosterone because the decline in total testosterone is typically due to lifestyle factors. You know, you have what's called your hypothalamic pituitary adrenal axis, the HPA axis, and under times of stress, particularly chronic stress. In addition to things like inadequate fatty acid intake, which is very typical of a westernized diet, sometimes mold and mycotoxins exposure, which is an increasing issue in a post-industrial era, electromagnetism specifically EMFs, higher frequency EMFs from cell phones, Wi-Fi, etc.

A lot of these things introduced chronic stress to the body that wind up causing you to upregulate both cortisol, which kind of shifts your pathways away from testosterone production. And that chronic stress also tends to amplify something called sex hormone-binding globulin or SHBG, because if you think about it, what SHBG does, as the name implies it, binds to the total testosterone and keeps that from being bioavailable in the form of free testosterone. And so, the sex hormone-binding globulin goes up because from an evolutionary or ancestral standpoint, your body wouldn't want you to be making babies in a time of stress, or famine, or plague, or you know, something else that was assailing the body, so it downregulates fertility. So from a chronic stress standpoint, you see the decrease in total testosterone that then leads to the increase in cortisol and sex hormone-binding globulin, thus then downregulating free testosterone.

And to make matters worse, as you're exposed to plastics, personal care products, what are called phytoestrogens, and many household cleaning chemicals, shampoos, body care products, etc. Even plastic bottles, you get what's called aromatization. And this means that a lot of that total testosterone is not only becoming bioavailable as free T, but it's also getting converted into estrogen. And so you have this cluster of low-total testosterone, low-free testosterone, high estrogen, high cortisol, high sex hormone-binding globulin. And that's really the uphill battle a lot of guys are facing these days.

And there are certainly, you know, when you hear the reasons, it's not rocket science to figure out how to tackle this, right? Like stress control strategies, really good ancestral nutrient rich diet that has a lot of fatty acids in it, avoidance of products that contain chemicals, plastics, mitigation of exposure to Wi-Fi, and other electrical signals whenever possible, ensuring that your environment is cleaned up just from a pure air and toxin standpoint, you know, using low volatile organic compound or low VOC furniture, or using HEPA air filtration in your home, doing a mold analysis to make sure you're not getting exposed to mold and mycotoxins in your living environment. And you start to go after all these things well, you know, cleaning up any consumption of water from plastic bottles. And that's really how you can mitigate some of the damage.

And, you know, in addition to that, I recently spoke at the A4M, the anti-aging medicine conference for physicians, and kinda gave a talk about a lot of things guys can do that are low hanging fruit before going out and getting testosterone injections, or creams, or repellents, or things like that. And there are ways that the guys can naturally increase testosterone, you know, not only the dietary strategies that I mentioned like increased fatty acid consumption, but also basic nutrients. Some of the biggies being creatine, boron, zinc, a full spectrum mineral complex, even maca root and some of these herbs such as epimedium, or horny goat

weed, or tribulus, either increase libido just slightly, which makes you have more sex typically, which increases testosterone in and of itself, but may also cause a slight bump up in testosterone.

And then from an exercise standpoint, you know, lifting heavy complex lifts like deadlifts and squats with long rest periods so that you're lifting heavy and exhausting the muscle, combined with briefs spouts of high-intensity interval training with long rest periods and a real attention paid to working with your legs. Like the reason you do more exercise with your legs, your legs have the highest concentration of what are called androgen receptors, so that testosterone that is available in your bloodstream gets pulled into the muscles more readily via those androgen receptors.

And so as you can see, not only can you limit the damage on one end via the HPA axis and some of the sex hormones-binding globulin and cortisol, but then you can kind a fuel the testosterone, fire on the other end with heavy lifting, high-intensity interval training, long rest periods, and some of these basic minerals and nutrients that you can supplement with, or put into a smoothie, for example. So those are some of the things that you can do regarding testosterone and also why it's an issue.

Katie: Yeah, it's pretty drastic. And those are great tips. I know some guys listen to this podcast, but a lot of women, so that will help hopefully a lot of husbands. Also, I recently had one of those decade birthdays that made me realize I'm not 21 anymore, and that a body my age that's had six kids functions a little differently than a younger body. And I know that you've been delving into the world of antiaging and longevity. So I'd love to hear your current take on things that people can do to help, you know, age gracefully or age in an appropriate way, and slow the aging process to be, you know, not any faster than it has to be.

Ben: Oh, boy, oh, boy, there's a lot. I'm working on a big book on this right now, actually. And what I'll do is from an antiaging standpoint, let me give you...let's see, I'll give you three kinda, like, natural free tips and maybe three kinda more advanced antiaging protocols. So from natural basic standpoint, we can look to the Blue Zones. And you know what? I'll with five for the basic tips because really, there's what's called a Venn diagram, meaning that when you look at all these Blue Zones where there's a higher than normal number of centenarians, there are certain characteristics that are consistent across some of these major Blue Zones like Loma Linda, or Okinawa, or Nicoya, or Sardinia, what's another one? I'm blanking. There's one other that I didn't name.

But anyways, regardless, they all have a habit of not smoking. And, you know, I'm back and forth on the whole, like, new era of vaping and e-cigarettes. I have a hunch that there's a little bit of lung damage that occurs especially with some of these vape pens that have what's called propylene glycol in them. But there's not a lot of that on the vaporizing, but we do know that none of these areas smoke. In addition to that, they have high intake of wild plants. They do a lot of like, you know, bilberries, and lingonberries, and dark leafy greens, and bitter melon, and nettle, and thyme, and parsley, and cilantro, and plenty of rosemary like we see a high intake of spices and herbs compared to what you'd see in the western diet, a lot of bitters, a lot of tannins, a lot of wines and coffees.

And then you see a high intake of legumes, high intake of legumes, which probably is keeping their blood glucose pretty low. And I know that that lentils and the, like, kinda get thrown under the bus these days and the whole paleo circle or, you know, folks who endorse like a plant paradox type of diet. And I get it. If you have leaky gut or gut issues from living in a westernized society, and you need to fix that so you can return to a more ancestral diet. But eventually, it appears pretty favorable to be including things like, you know, split mung beans, and lentils, and nuts, and seeds, and things like this in your diet, assuming they're fermented, and soaked, and sprouted, and prepared accordingly.

So the legumes, wild plant, and take not smoking, low-level physical activity during the day, we don't see a lot of folks stepping into CrossFit boxes or doing a lot of like, very, very hard workout, you know, again, in an era where a lot of us are relegated to cubicles, I get the idea that if you're sitting all day, or inactive all day because your job kind of force you into that position, you have to compress a lot more exercise into a shorter period of time. And maybe going to the gym is a necessity for you. But if you can, you know, engage in low-level physical activity during the day, like right now, while we're talking, Katie, I'm walking on my treadmill, you know, I'm gonna walk maybe four miles a day on the treadmill, pick up the hex bar in the room next to my office a few times for some heavy lifting, I'll do some pull ups and just kinda sprinkle physical activity in throughout the day. You don't have to be a hunter, or gatherer, or construction worker, or painter, or something like that. You can kinda hack your environment to simulate that.

And then you see, finally, a very large emphasis placed on love, life, relationships, belief in a higher power, the spiritual disciplines like fasting, meditation, silence, solitude, prayer, some type of worship, and these are the characteristics that you see that, you know, if you think about it, those are all relatively free or easy, right, not smoking legumes, wild plant intake, time spent in low-level physical activity, preferably outdoors if you can, and, you know, prioritizing relationships and spiritual health. So those are our kind of, like, the easy pieces for antiaging and longevity.

And then, you know, there are a lot of crazy things people are doing now that really do move the dial. Like, you know, a plasmapheresis, or these blood exchanges, or plasma exchanges, where you can go to like the Young Blood Institute, or embouchure, one of these places on like the Silicon Valley and in a sort of oil change for your body have your plasma replaced with an infusion from that if a young healthy donor. Some of your blood removed and then reinjected with new plasma in it. And this is something that a lot of folks are doing and seeing some pretty profound improvements. It causes an increase in what's called GDF11, which is a protein that has an antiaging effect. So that's one is blood exchanges, that's one that's pretty interesting.

A lot of folks are taking both Metformin and rapamycin. Metformin being something that, you know, was once thought of as just a diabetic drug in the '90s, but it's now come to light that it has some pretty profound improvements in reducing the host of a lot of different chronic diseases like Alzheimer's, and cancer, and, you know, lowering of inflammation. It does come with some side effects like nausea and gastric disturbances, possibly a little bit of mitochondrial damage, so probably not a great choice for an athlete. I don't take that one, but a lot of my friends and the antiaging sector do. I opt for more natural approach, right? I use a lot of things that control blood sugar like Ceylon cinnamon, and apple cider vinegar, berberine, and bitter melon extract, curcumin. Like, in my opinion, there's a lot of things that naturally simulate what Metformin is doing. But I should name that a lot of folks are taking that.

A lot of folks are also taking rapamycin, which is derived there, was found in a soil-derived bacteria. It's a chemical that's created. They found it on Easter Island. And then the native name for that island Rapa Nui, so they call it rapamycin. And it's an immune system suppressant but it also appears to increase lifespan pretty remarkably, like by 30% in mice, not like average lifespan but maximum lifespan, which is pretty unheard of. And the problem is because it's an immune system suppressant, it can increase your risk in infection, some lung toxicity, and some other issues. That's another one I don't take. But, you know, that Metformin, rapamycin stack is certainly quite popular. And I'm just pulling out some fringe examples for you just to give people an idea of, you know, what folks on the cutting edge are doing.

And then there's this idea of telomerase. Telomerase being something that would increase your telomeres or like meditation, and yoga, and exercise, and sunshine, that will decrease the rate at which your telomeres shorten. But you can also just increase your telomerase capacity to be able to lengthen the telomeres, not just keep them from shortenings, rather than just, like, keeping yourself from dying, you'd actually be extending life. And, you know, for like 800 bucks, you can get a bottle of TAM-818 from defyaging.com for, I think, closer to 600, you can get TA-65 made by TI sciences. I think that one is on Amazon

There's another kind of cluster, there's a one that I like. It's a little Chinese Adaptogenic Herb Complex with a whole bunch of a astragalus in it, that one's called TianChi. And you can take some of these supplements that increased telomerase activity. And there's some very interesting research and even gene therapy delivery mechanism that being based around that. I mean, well, just one chapter, my book is nearly 80 pages long on antiaging and longevity. So I could go on and on, but those are just a few examples for you.

Katie: I'll make sure they're linked in the show notes so people can go deeper if they want.

Ben: This book, it's not out. It won't be out until next year but it's called the...well, the website for currently is discoverkey.com. But I'm playing around with names for it, so, you know, I just go to bengreenfieldfitness.com, and eventually, I'll publish it my newsletter or whatever, and let people know when they can pre-order. But, yeah, it's one of those deals with the publishing industry. You know how it goes, Katie, it's like back and forth on titles, and where the book websites gonna be, and all that jazz. The book exists at least, it's all written.

Katie: Awesome. And will wait with baited breath for that one. And I'll wait until you let me know about it and share as well. Another concept you write about a lot and explain really well is the idea of hormesis, or making yourself harder to kill. And I know that you do a lot of things to do this and you're also a competitive athlete, you have this built in. But how can moms and families do this? And explain what it means.

Ben: Yeah. Hormesis is this idea that things that damage the cells just slightly result in an upregulation of some of the natural built in defense mechanisms of those cells, like their antioxidant production. And the cell in the body overall becomes more resilient. So for example, something that would be bad for you in high amounts, but good for you in low amounts would fall into the category of hormesis, so sunshine, right, good few and low amounts but stay on the sunshine too long, you're gonna get cancer and excess damage, the heat, right like sauna exposure. You upregulate your heat shock proteins, the cells become more resilient. You stay in the

sauna for two hours, you might have a cardiovascular incident from mineral loss, but you know, short exposure sauna, cold, short daily exposures to cold showers, cold soaks, so cold baths, and you know, as anybody knows, if you stay an ice bath, or something like that for too long, you're just exhausted all day. And it's probably not that great for the immune system, but short exposures have a hormetic effect.

Then there is a, you know, wild plant intake, right, wild plants have this built in natural defense mechanism. And this is probably why they confer longevity to the Blue Zones upon consumption because they actually increase your body's own antioxidant defense mechanisms when you consume them. And your body kinda has to fight against a little bit of what this wild plant is doing to defend itself.

If I could throw one other interesting example, I'll use it. It's kinda shocking, but when you look at some of the rodent models around Chernobyl and radiation areas, they're actually living longer. So there's even this evidence that mild low-level amounts of radiation could be good for you. And I think that might be tied into the concept of like Earthing, and grounding, and going outside barefoot. Like the earth emits a natural very low-level of radiation. And I suspect that, you know, in addition to what are called the electromagnetic frequencies that you get when you're walking outside, doing what's called Earthing or grounding, I suspect we're getting just a little dose of radiation too that could also confer this hormetic effect. So those are some examples.

Katie: That makes sense. And those are easy to implement as well. I guess I think of, like, Jessa, for instance, your wife, she's amazing. But, like, all these biohacking things that you do, and that I'm so interested in, just out of curiosity. And I remember talking with her about it and asking her if she does all of this. And she's like, "No, I just don't think it has to be that hard." But yet, she maintains good health. And she's like, all the things you've said, I think of Jessa, she moves all day taking care of the garden, or the kids, or the animals or whatever, and she, you guys, eat very clean. And she seems to have mastered it. So it's like she's a good, like, mom role model when it comes to that.

Ben: Yeah. Yeah, exactly. And my perspective on this is, you know, some people like, "Oh, well, that's unfair. I have to take supplements. My blood work and my biomarkers and my functional medicine doc, and my integrative medical practitioner, they've got me on, you know, all these supplements. And, you know, how come Jessa Greenfield does okay?"

Well, part of this is genetics. Like, when we look at a lot of these Blue Zones, not to kick that horse to death, like a lot of these people living in a long time despite their lifestyle, not because of it. Like, they don't necessarily do all this biohacking. We could certainly, even though this might sound paradoxical to my no smoking comment, we can find, like, cigarette smoking old grandmas who are 110, but they like their cigarette smoke is playing bridge every night surrounded by love, and life, and relationships, and laughter. And they probably have some pretty hardy genetic factors like glutathione production and antioxidant production that helps to kind of protect them against some of those things.

And then we see other people who are, you know, like me. Like, I don't wanna sound Orthorexic but I'm a genetic mess. Like, I've got low glutathione production. And like, I've got low BDNF, like, brain-derived

neurotrophic factor production. I've got the inability to be able to make vitamin D from sunlight, I've got the APOE 34 gene, meaning that a lot of these saturated fats are highly inflammatory for me, you know? And then you test my wife's genetics, and she's like, got almost nothing going on that would be like a flag from a genetic standpoint.

So sometimes, we're just dealt to certain genetic card, and some people to really feel good, like, need to take a few extra steps to be able to live a long time or to operate without brain fog, or sleep well, or whatever else. So a big part of it is genetics. And then part of it, too, is she is living a pretty natural lifestyle as she's alluded to. Like, I'm inside on computers, I'm still exposed to signals, I'm not outdoors as much as I'd love to be, you know? And I love my job, writing, and podcasting, and being an author. But I mean, you know, if I were just like a hunter or maybe a construction worker, something like that, like, I probably would have to take fewer supplements and kind of mitigate the damage a lot less because I'm not flying all over the globe, I'm not disrupting my circadian rhythm, I'm not getting exposed to all these modern post-industrial assailants. You know, my wife pushes the wheelbarrow around, and gives alfalfa to the goats, and takes care of the chickens, and she's out with the soil-based probiotics in the garden, and she's with the sunlight and the fresh air. And I think right now, she's out on the hike with the dog.

And so, you know, that natural lifestyle does dictate a lower need for some of these biohacks, etc. as well. So there's a lot of factors, but ultimately comes down to, A, your genetics and, B, you know, what kind of uphill battle are you fighting? You know, if you're blessed enough to have a very natural ancestral lifestyle, yeah, there's a lot less of this that you need to do when it comes to a lot of these modern, you know, technologies, or biohacks, or supplements, so to speak.

Katie: Yeah, that's such a great point.

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Katie: You mentioned that you travel a lot. And I think I feel like I travel a lot and you travel so much more than I do. Do you have any tips for staying healthy while traveling, because I know that's a big issue for moms, especially with kids?

Ben: Yeah. Well, the circadian rhythm piece I mentioned earlier, that whole light blasting in the morning thing is important. Few of the non-negotiable for me when I travel is, A, I get outside barefoot, Earthing or grounding as soon as I can after that flight. I'm the guy in the back, parking lot of the hotel, my bare feet in the parking lot doing some yoga, you know, in the morning when I wake up and I've checked in and get outside.

And you can also travel with pulsed electromagnetic field devices that if you can't get outside, let's say you're in freakin' Vegas or something, it's so difficult to get outdoors and, you know, that maze of casinos, you can use these handheld devices to kinda simulate that grounding or Earthing effect. And I do that as well. And goes into my interview with Dr. William Pawluk, on my website, that's P-A-W-L-U-K, to learn more about those type of grounding devices.

I do some natural anti-inflammatories, particularly sulfur-based anti-inflammatories, like a large intake of cruciferous vegetables, supplementation with things like glutathione or curcumin. Garlic extract is also quite good. Like, any of those really do a good job upregulating the specific pathways that get activated during airline travel. And another one is ketone esters. And I like those because I don't eat a lot when I travel, I wait. It's good for the circadian rhythm. It's good for clearing inflammation. It's just one less inflammatory battle the body has to fight during airline travel. But I will use some of these ketone esters or ketone salts because they have a double whammy effect of keeping your appetite satiated while being in a relatively fasted state while also causing a little bit of an anti-inflammatory effects.

And then a couple of others that I would recommend to folks for airline travel specifically would be hydrogen-rich water. If you can get some hydrogen-rich tablets that you can add to the first few glasses of water that you have when you finish traveling, very good anti-inflammatory fact for the type of issues that occur when you travel. And then when I'm traveling across multiple time zones, particularly west to east, higher-dose melatonin is pretty effective for west to east to travel. When I say higher dose, usually if I'm traveling internationally, the first night, I take like 40 to 60 milligrams of melatonin, a lot of it. And then for the remaining time spent in that area, I'll usually use about 3 to 10 milligrams a night. And that works very well for me in taking care of some of the downregulation of melatonin production by the pineal gland that you get during travel. There's a lot more somewhere on my website. I've got an article about, like, 15 different ways to reduce jetlag. But those are a few of the biggies for me.

Katie: Awesome. We'll make sure to link to that article as well. I wanna switch gears a little bit and talk to you about something that you don't often talk about. I feel like you are very well-established as an expert in all things nutrition, and health, and biohacking. But something else I'd love to talk to you about that you don't speak publicly about very much and I hope you're okay with is parenting and raising exceptional kids, because you and Jessa have twin boys. And they're awesome. My kids love them. They've gotten to play before. And I'd love to hear some of your parenting philosophies and go a little bit deep on that because I know that we share that the idea of trying to raise kids who actually do good for the world when they're adults, and who

contribute in a meaningful way. So just take us through an overview of some of the ways that you and Jessa have done that with your boys.

Ben: Yeah. I'll give you three examples. One would be when it comes to increasing physical fitness in your children, there's a very interesting study at University of Essex where they had children do what's called a bleep test or a beep test where the beeper sound, and you run to the cone, and the deeper sounds again, and you run back to the original cone, and you're running from cone to cone and increasingly shorter intervals. And the children who performed best on that test, once you isolated for, you know, for wealth and, you know, weight, and all these other factors, where the children who had parents that they perceived to be physically active. Meaning that the amount to which you either including your children in your workouts, which can be annoying, but it's also a good thing to do, or your kids even see you working out, meaning you're not getting up at 4:00 a.m. before they're up, or if you are, you're also, like, maybe going on a walk with your kids or letting them see you take those Pomodoro breaks during work to swing the kettlebell, or you're horse playing, or wrestling with your kids at night. Anything they do that sees physical activity or engages them in physical activity with their parents appears to directly improve their fitness. It kinda even regardless of how much they're working out. It's just like osmosis kind of. So that was very interesting study. So include your kids in your workout to let them see working out.

Another one from an educational standpoint, is we homeschooled for a while. But my wife is somewhat dyslexic. She does not have the heart of a teacher, didn't enjoy school. And I travel so much that it was kinda unfair to the kids. Even though I love to teach, I just wasn't there all the time for them. So we placed them into a private school. But my philosophy on public or private education is this, that it actually is useful for your child to learn how to work well with others, cooperating group situations, be a good little factory worker, maybe not have that lone wolf independent mentality with regards to everything. And instead, learn kind of a combination of individualism and group cooperation. And I think that the school does very well for that. And I also consider it to be kind of a form of outsourcing. Like, I don't wanna relearn calculus and teach that to my kids, I just don't have the time. And I don't necessarily wanna...you know, I don't feel like I'm not gonna be the best Spanish teacher for them, because I only took a year of it in college, etc.

And so if you take that route, you do need to understand the minute your child walks in the door from school, your job as a parent begins to unschool them, meaning that I'll take them outside to shoot the bow, and/or drive them to cooking classes, or mom will take them to tennis, or we'll go downstairs and I'll teach them meditation and manifestation, or we'll do like sauna to ice, to sauna again. Like, all these kind of like more ancestral things, or self-improvement tactics, or just general lifestyle skills that they're not gonna learn in school. And so if you do that one, two whammy, I think it works out very well. It's kind of a combination of outsourcing the education, but also understanding your role as a parent with the whole, like, unschooling process.

And then finally, we use what's called kind of like a love and logic approach to parenting, meaning that rather than saying no to our children, which we very rarely do, rather than limiting candy, or gluten, or alcohol, or anything else, we instead educate our kids about the consequences of their decisions. And then let them make the ultimate decision. For example, there is no rule that our kids can't have the cupcakes and the birthday cake at the party that they go to, or the bread that's brought up to the table at the restaurant that we go to, but I have simply educated them about gluten, you know, what it does your nervous system, how it might

affect performance at school the next day, they might not have a great night of sleep, you know, it could cause a little bit of gastric inflammation, etc. And then, you know, I buy them this gluten digesting enzyme they can use it they would like to. And then they can make the decision themselves.

Usually, go to a birthday party and they'll be like, "Dad, the cake was so good. I only had about quarter slice because, you know, I know it wasn't a gluten-free cake but I had had some, it was pretty good." And, you know, sometimes they go to the refrigerator and have a shot of, like, Restore or something if they're concerned it had glyphosate in it. And, you know, I tried to do a good job educating them about these things. But I never would say, "Don't eat the bread." You know, "You can go to Jimmy's birthday party but you better not go near those cupcakes." I mean, that situation, they're gonna, like, steal three cupcakes and hide them away under their bed, because that's the forbidden fruit all of a sudden, you know?

You know, another example would be like alcohol. You know, alcohol wasn't really a thing for me growing up. The kids just didn't drink alcohol. Why not? I don't know. You're just not allowed to go near it. So my first experience with alcohol was somebody gave my dad a really nice bottle of scotch and I saw it there on his desk, and it's alcohol, and nobody was looking, and it looks like kinda cool and sexy in that glass bottle so I took it to my room, and I drank it. I think it was 15, I wanna say. And I got drunk in my room. And that was my first experience with alcohol is getting drunk in my room. That's not a good first healthy experience. Some people be like, "Oh, you learn a lesson the hard way." But no, like, our kids when, like, a new shipment of wine arrives, we're sitting around the dinner table, you know, I'll give them a taste and a little shot glass and say, "You taste those herbs and those tannins," and, "What kind of flavor notes to get on this wine?" They'll take a little sip and they get over this really healthy relationship. And, you know, there's no way wine is gonna be a forbidden fruit for kids because they'll get little sips and tastes here and there. And yeah, maybe a social worker is gonna show up at my door someday and, you know, and say, "Hey, I heard on a podcast, you're giving alcohol to your kids." But, you know, you get the idea. You educate your children about the consequences of their decisions. And then you let them make the decision.

And it's the consequences are dire, right? If you're at the New York subway and they're about to step on the platform and get hit by a subway train, you grab them and rip them away and say, "No," right? But if it's a hot stove, and your two-year-old toddler is going near the hot stove and you say, "Stove, hot, owie. Stove, hot, owie, careful." And they go to the stove and they touch it anyways, well, you told them the consequences, they tried it. They're gonna have to deal with consequences now. And I guarantee, they'll have a much healthier relationship with the hot stove going forward. So, you know, let your children fall, let them make mistakes, but make sure you also educate them about the consequences of their decision. So hopefully, they make them more wise decision when the time comes.

Katie: Absolutely. I share your ideas on that. And in a lot of modern society, we've gotten such a focus on keeping kids safe that we do. We tell them no one things that are perfectly logical to let them do, like, playing outside, or climbing big trees, or doing things that are scary. But we say yes to things like screen time, which is actually really bad for their brain. And what do you do about things like screen time? Do you just educate on that as well, or are there actual limits in your house?

Ben: No, they can use the phone, computer as much as they want. They can have the Wi-Fi on the phone if they want to. But you know, I told them, you know, Wi-Fi, you get that near your little balls and you know, you can actually cause sperm damage. You may risk your actual babies that you have later in life, having physical or mental deficits. It's not good for your body. It's not good for little rapidly dividing cells in your brain. Here's my phone if you need to use it, if you want to mess around with an app on it or something, but, you know, "Here you go, son. I tried to put my phone on airplane mode, son. Here you go." And you just let them make the decision based on what you've educated them about.

And, you know, my kids have little laptops that got sent home with them from school, and so I bought them little, like, laptop shielding pads for their laps. And there's no requirement that they use them, but I use it. I told him what it was for, right, and lo and behold, they used their little screens every time they get those computers. And they see me after about 6:00 p.m. wearing my blue light blocking glasses when I'm on the computer. And I bought them both, you know, two sets of blue light blocking glasses, one for clear during the day, one for red and orange during the night. And they see Dad doing that. And so they do it too. But there is no requirement. If they don't wear them, I don't say go put them on, I simply make sure often to point out the fact that "Hey, son, I'm wearing my blue light blocking glasses because after 6:00, I bet I'm gonna sleep amazingly tonight." It's pretty rare that my son will look up and nod his head and look away. He's like, "Oh, yeah, I'm gonna get mine, I'm get mine. They're upstairs," you know? But I could have said, "Dude, son, go put on your blue light blocking glasses now, or you're on timeout for 10 minutes." Like that is just a crappy approach to parenting, in my opinion. So, yeah, that's how we approach kind of, like, the screen technology issue.

Katie: And truly, that applies to so many aspects of life, you know, beyond just even use screens or alcohol, or all the things we've talked about, and realizing as parents that our kids still have, like, they have independence, they have free will, even as much as we have sometimes may not want them to. And they're going to find ways to exert their independence or they try new things, or things they're curious about. So it seems much healthier to just have the conversations, educate, and have that kind of communication. Have you found with your boys that that's led to a very much two-way communication with them, and they're willing to come to you with anything?

Ben: Yeah, yeah. I mean, there's pretty open line of communication in our house. I mean, we're very open, transparent people, you know? I mean, it confuses people sometimes because we're a Christian family, but we're not very uptight. It's like, mom and I, we're gonna have sex. We just tell our kids like, 'Hey, we're gonna have sex. Go read books, or whatever and don't bug us.' And, you know, our kids just know, like, it's not like this weird, mysterious thing, or, like, mom and dad are making love, like, that's what a married couple who is in love does, you know?

And so, yeah. When I was growing up, I didn't even know, like, sex existed until I was like, 11, you know? And that's a totally different world for me, and, you know, I figured out most of it. But I know about it from, you know, a modem, and porn, and a computer in the early days of the internet, like that was, you know, I discovered sex, you know? That's not how you want your kid to discover sex, you know? That's just one simple example. But, yeah, it's very open, transparent household. And our kids can come to us and talk to us about anything. And I cry in front of them. And I admit my mistakes in front of them. And I tell them when I'm being a bad father, you know, if I feel like I made a poor decision the prior day because I...let's say, I skip some Friday

assembly they have to do a call that wasn't 100% necessary, like, and I'll sit down and then stand be like, "Listen, guys, dad feels bad. I made a bad move yesterday. I give a bad example as a father. I didn't have to take that call. And I really wish I could have gone to your assembly and seen the talk that you gave." And so yeah, I mean, we're very open in our household, open and transparent.

Katie: I love that. I'm curious with the combination of...I mean, you as a professional athlete and a biohacker and then Jessa's more laid back just like full life approach, where do they fall? Have they gotten interested in all the health stuff you do, or do they try some of it? Where do they fall in that?

Ben: Like, they have a little Joovv light. They have a little biomat, and they have a blue light blocking glasses, and an essential oil diffuser in their room. And they kinda go back and forth. You know, what's funny is, a lot of times when they're just like, at home with me and mom is gone, like, they do more of the stuff with me just because they're hanging out with dad, doing what dad does. And, you know, when, when mom is home, it's like, a lot of times, they're more just, like, you know, out feeding the chickens and, you know, up and drag alfalfa and whatever. So, it's kinda interesting. It goes back and forth. But I think they're kind of like me. They got one foot planted in the realm of the ancestral wisdom and another foot planted in the realm of modern science. And I'm hoping they develop a healthy relationship with both.

Katie: As we wrap up, any book recommendations? I know in a minute, we'll talk about all the places people can find you and read your work. But are there any other books that you didn't write that have really had an impact on your life?

Ben: Sure. Let me give you three examples of books that I like that maybe folks aren't super familiar with. One would be "Poor Charlie's Almanack," by Charlie Munger, the guy who is the partner with Warren Buffett of Berkshire Hathaway. Fantastic book on kind of like human illogical fallacies, and the way humans operate, and how to negotiate, and just how to understand humans better. It's a good book of wisdom.

Another one that's pretty good, even though you mentioned that I have a journal, there's another pretty cool journal out there. That's Benjamin Franklin's little journal. You can find on Amazon. And you just answer the question, what good will I do this day? And then at the end of the day, what good have I done this day? But there's little, like, questions in there, as you go that are kind of like study questions, you know, like, what's one thing that you could change in your local community that would make your neighborhood a better place? And how could you go about doing that this week? You know, just like little thought-provoking questions like that. So that's a cool little diary a lot of people aren't aware of.

And then the last one, let me think. There's a lot really good books out there. But let me think along the lines of what your audience is interested in or maybe doesn't know about and I would say... You know, let me tell you a book that I'm reading right now that's actually fascinating on mold, and mycotoxins, and Lyme, probably one of the best books I've read on the topic. And I know a lot of people are kinda concerned about that these days. And so I'm gonna recommend this book because it was really, really good with respect to this. It's called "Toxic: Heal Your Body," by Dr. Neil Nathan. "Toxic: Heal Your Body," by Dr. Neil Nathan. Really good read if you're kinda interested in becoming a complete ninja on this whole mold, mycotoxin, Lyme thing.

Katie: I love all of those. I'll make sure they're in the show notes at [wellnessmama.fm](http://wellnessmama.fm). And Ben, where can people find you and stay in touch online?

Ben: I do a free blog and a podcast every week at [bengreenfieldfitness.com](http://bengreenfieldfitness.com) and do newsletters that have, like, weekly roundup, some features in them, of all the new things I'm trying. And that's a pretty good place to start. It's [bengreenfieldfitness.com](http://bengreenfieldfitness.com). And then I also formulate supplements and also have a coaching program for trainers, and nutritionists and physicians, and chiropractic docs, and people who wanna learn more from me. And that's all over at [getkion.com](http://getkion.com), K-I-O-N, [getkion.com](http://getkion.com). So those are a couple good places to get in touch with me or to see more of what I'm doing.

Katie: Perfect. Those links will be in the show notes. And then I know how busy you are. I'm really appreciative you are here with us today. Thank you for your time.

Ben: Okay. Thanks, Katie. That was fun.

Katie: And thanks to all of you guys for listening. I hope you'll join me again on the next episode of the "Wellness Mama" podcast.

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