

THE MODEL **HEALTH** **SHOW**

EPISODE 563

Energizing Our Food System: Healing The Earth, The Soil, & Our Bodies

With Guest Robb Wolf

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SHAWN STEVENSON: Welcome to The Model Health Show. This is fitness and nutrition expert, Shawn Stevenson, and I'm so grateful for you tuning in with me today. Where does our food actually come from? For me growing up, I just thought food came through the drive-through window, or it came out of a Happy Meal box, or it came out of a package, or it came from the loving hands of my grandmother. There's different modalities of where my food was coming from, but suddenly it was appearing, but I myself had no hand in that process. I was very disconnected from where my food was originating. And there were different degrees of that. My grandmother had a garden, she would can and jar things, we had a cellar downstairs, which was super creepy. I would have nightmares all the time, about running up those basement stairs, alright? Shout out to the cellar.

But also, my grandfather, he was a hunter, he would forage and all these things, and so, the proximity of the foods reaching me was a little bit closer. However, this was during the '80s, I'm a '80s baby, and so processed foods were hitting its stride to where the microwave dinners and the processed foods, and fast food was becoming more and more dominant, just popping up around our neighborhood. And so, the accessibility, the fun of it, the marketing that this has everything your kids need, and also if you think you're missing something, just get them a nice little Flintstone vitamin. I love the Flintstone vitamins. Probably have some residues from that mess in my body to this day. But we started to have a twisted reality of what food is, where food comes from, and also, we lost sight of understanding that this is determining what I'm making my body out of. My tissues are actually being made from this food, or lack thereof. A lack thereof food, food-like products.

They might be stuff that we can eat, and be able to extract some kind of nutritive components from it, but is it something that my cells can actually, healthfully interact with? And this is a big truth for us, to have and keep in our back pocket at all times is that every single part of our bodies is made from the food that we eat. Our heart is literally made from the food that we eat. That amazing brain of yours is literally made from the food that you eat. Your eardrums and those tiny little bones creating vibrations and sending these electrical signals through your brain and hearing what I'm saying right now, is made from the food that you eat. And we get to choose what we're making our bodies out of. The human body is incredibly resilient, it will do a patchwork job. It can take some Elmer's Glue, and some bubble gum, and some sticks and try to hold you together. It can do that; it can do a patchwork job. But we can provide ourselves with the most sustainable high-quality materials to make our bodies. Right? So, brick and mortar, alright? We say that analogy quite a bit. But make yourself into a place where you don't got the big bad wolf coming by, being able to huff and puff and blow your house down super easy.

And so, keeping that insight in our back pocket, we start to consciously choose again, "What am I actually making my body out of?" And to take it into today's conversation, "Where is my food coming from?" because there's a big difference in food that is grown in microbial-rich, nutrient-rich soil. And mono-cropped, genetically modified dwarf wheat fields. It's going to be very different food that is coming and reaching our bodies. Even if it's the same food but grown in different soils, it's going to be very different in the nutritive aspect of those foods. And so, we're going to be talking about today, an important conversation around the farming of food and sustainability, and being able to extract more healthfully, nutrition, and then being able to give back to our environment that gives so much to us, to our planet that gives so much to us.

We would not be here... Everything about us comes from the earth. When we talk about food, everything about you, every cell in your body is made from the food that you eat. Where does the food come from? It comes from the planet. Something to definitely take more stock in and be more grateful for, and how are we treating our planet right now? And what's the current landscape look like, literally, and what are some solutions to help turn the ship around? And today's episode was really inspired by my youngest son. When schools began to get shut down and kids were forced to stay at home and to do online learning and these type of things, and also even being able to go back and being forced to social distance and wear masks for hours a day, and all these different things, this new parameter that's been built around how our children interact with each other that has forced a lot of folks to re-evaluate the education system itself. And the outsourcing of our children's minds to other people and to other entities that might not hold our children's best interest at heart. Not that that's intentionally nefarious, but quite possibly mis-educated themselves, and then passing that miseducation on to our children. And also, a huge lack of critical thinking being instilled in our children, where there is a right and wrong answer, end of story.

And often, that right or wrong answer, if it's history, for example, that history is based on who won, alright? It's not necessarily the whole history for sure, but it's just based on who gets to write the history book. And so, being able to step back and I really realized that it's an incredibly stressful thing, to be an author and to be a researcher and to be somebody who's creating programs, and the list goes on and on. I've got all these things on my plate, but now, teaching a third grader, fourth grader, I didn't necessarily sign up for that. I didn't think about it in that lane of, "How much..." Of course, our family, education is a big part of our culture. We spend a lot of time together in advancing these things. However, in looking for the school that he attended, I was trying to look for the lesser of evils, basically. A school that was doing project-based learning that had him do real stuff, that has a mission towards giving and programs of being of service to the community and some even threads of entrepreneurship and being able to create things himself, and so, really great boxes were getting checked.

But, as time went on and seeing that it was still a lot of this rote memorization, and there wasn't much room for discussion about ideas and possibilities and creativity, and again, critical thinking. We leaned into it a little bit more and decided to put a protocol together for him, that is more home-school-based, you know? He does have a little pod that he'll go to just a couple of times a week now, but primarily we've created a system to where I teach him every week. He's got two days with me where we do nutrition and anatomy together. This kid knows more about nutrition than 99% of the population already, which is amazing, alright? But also, I have to still leave open room for him to discover and understand things himself, and to be able to ask questions, which this is what conventional education could be a bit of a headache or not that viable, because children tend to ask a lot of questions.

And so, as I'm teaching him different things in the subject matter, it's just a question after... Or insertion after insertion, "Well, what about this? Or, what if this happens?" This kind of thing. And so, I have to maintain a sense of balance and patience and hold a space for that while staying the course with the lesson, you know? So, he's driving off different ways, I got to get back to the main road. But that's part of the process. And again, I wouldn't have known this, that he would be bubbling up with questions that he would not have answered had he been in this other setting. Not to say there's a right or wrong here. What it is, is options and opening our minds to that. What it is, is possibilities, and moving forward, what can we do for our children to create a real atmosphere of real education? Because currently, if we look at the results of what's taking place in our education system, we've been churning out a lot of people who are unhappy.

We've been churning out a lot of people who are not passionate about the job that they then transition to from this conventional education that they got. We're seeing a lot of people who churned out without an education on real practical things that apply to their life, that's what school is supposed to be about, right? A university, if you listen to the name, the universe, learning about the universe, we're not doing that. It's these very cookie-cutter vanilla things oftentimes that don't really equip people for being successful in the real world. Alright? I don't know about you at your university, I didn't have a Success 101 class. I didn't have a mental and emotional wellness class, these things that really apply to the real world, and if you are getting... If you do have access to anything like that, it's kind of a French thing, that it might be on a couple of scattered universities here or there, but these things are emerging now, you know?

The field of positive psychology. There are more courses available on the subject, like studying happiness. Like, what actually constitutes a healthy, happy, sovereign human being? Because our system of healthcare and medicine has been so focused on disease, it's just been focused on problems, very little focus on solutions and conditions of the absence of disease, of

wellness. And so, that's even changing. Again, but the change takes time. People have known about these things for decades, how much this stuff matters, but you see how slow it can be to get into the university books, let alone high school and middle school and all these things. So, with that being said, so he was the catalyst for this because we've got these different themes to days of our week. So for Tuesdays, for example, we have Triumphant Tuesdays. Triumphant Tuesdays where we do a hard thing, you know, we do something challenging, whether it's a cold plunge or whether it's getting out and he's doing some drills and learning a new basketball skill with the hot beating sun, that LA sun hitting him up, you know?

And pushing him in a safe condition to where he's going to the limits of his comfortability, and really challenging him. You know... It may be even there's some frustration there, maybe there's some peace, maybe there's some kind of new capacity that's getting the ability to be emerged from his character, from his psyche. So Triumphant Tuesdays where he has to overcome something. Then Wednesdays, we have Worldview Wednesdays. So, this is wherein the evening we watch some type of a film that has a powerful message or a documentary with a purpose, but this particular episode is because of a Worldview Wednesday, where we watch together the film "Sacred Cow," that was produced by Diana Rogers, and co-created with my good friend Robb Wolf. And Robb Wolf is a New York Times Best Seller and one of the leading voices in Human Nutrition. And of course, we'll put some of Robb's past appearances on The Model Health Show in the show notes for you, but he is just absolutely brilliant when it comes to understanding how these different pieces work together.

And also, the film is narrated by Nick Offerman. Yes, Nick Offerman from Parks and Recreation fame, alright? So, he's got a really interesting voice, and there's so much character in his voice. And obviously, him being a part of this film is something that you could tell in his character if you've never seen any of his interviews, that he's interested in this connection between where our food is coming from and the quality of those things. And being connected to our primal connection to the world around us. And so it's a very enlightening film, and my son also wrote a paper on it the next day to kind of summarize some of his ideas and takeaways and insights that he picked up from the film, but it's really looking at things from a meta-perspective, and not just getting into a politicization about what humans should be eating, what we should be doing, but looking at the results of what we've done thus far. And if you'd... Can you take a look around at the world and you get to see it, first-hand the implications for health and also the health of the planet and how we've been growing food, man, it is just so eye-opening?

And this is something that's leaning in that, again, should be a more inclusive idea, regardless of our nutritional framework that we subscribe to, whether it's a Paleo protocol, keto protocol, vegan protocol, vegetarian protocol, a Mediterranean diet, whatever it is, for us to pay more attention to how our food is being grown, what has been done traditionally that has led to regenerative farming or regenerative nature of things on its own, and how can we tap into

those things and look at the results of what happens when we don't do those things. And we have so many examples that it's, again, it's incredibly eye-opening, and I think that everybody needs to know about this because the future does not look good for the production of food for all of our world family if we don't address these issues intelligently. And the great news is that people have really cracked the code and figured these things out in a way that is health-affirming for both the human body and also for the earth itself. So, I'm really excited about this episode to say the least. And another thing that I picked up from Rob that is a pretty much a daily part of my life now, is utilizing intelligently formulated electrolytes, especially in this time right now.

Again, it's one of those things... Most folks don't realize this, but it's becoming more and more deficient in our foods because of the quality of the soil, whether or not we're getting the optimal amount of electrolyte that we actually need. And electrolytes are minerals that carry an electric charge, and they enable signal transduction in the brain. For example, for your brain cells to actually talk to each other, electrolytes are required, or that conversation starts to get a little bit messed up, alright? That conversation starts to get a little bit sketchy between ourselves. And so, it's of the utmost importance, but we often don't talk about this, or if we think about electrolytes, we think about them only in terms of athletic performance, which they're incredibly important in that domain as well, but they're usually coming along with these abnormal amounts of really crappy sugar, and additives, and dyes, and all these things that have detrimental effects versus the benefit that we're trying to extract. And also, the sourcing, where are the electrolytes actually coming from? And just to stay in line with the brain, researchers at McGill University found that sodium functions as an on-off switch for specific neurotransmitters that support optimal function in the brain, and also protect the brain from numerous diseases, alright?

Literally, it's one of those things that protect against epilepsy. Sodium is one of those key nutrients that the brain needs to defend itself against these conditions. Another critical electrolyte, magnesium, this was published in the Journal Neuron found that magnesium was able to restore critical brain plasticity and improve cognitive function. Neuroplasticity, if we're talking about this, this is the ability of the brain to change and to adapt. I can't even stress how important this is. Another one, Double-Blind, Placebo-Controlled Study published in the Journal of Alzheimer's Disease found that simply improving our magnesium levels in adult test subjects, these were folks who were between the age of 50 to 70, was found to potentially reverse brain aging, no, this isn't potential, the extreme nature of it is potential, but across the board, it was able to reverse brain aging, but potentially by up to nine years, making the brain of test subjects, observationally and functionally nine years younger by optimizing their magnesium levels, but it's just not magnesium by itself, it's magnesium, sodium, and potassium are these key three, but they need to be in an optimal ratio. And Rob had a database, and the

folks that he's working with, a database of thousands and thousands of data points from different people on the optimal ratio.

And that's how they formulated LMNT. Go to drinklmnt.com/model. That's drink-L-M-N-T So it's L-M-N-T, drinklmnt.com/model, and you get to try it for free. They're going to send it right to your house, a special sample, sample pack of LMNT. Just pay a little bit in shipping, and they're going to send it right to you to try out for yourself. And I think you're going to love it. It's time to get salty, and there's different types of salts, isn't just one lane. Again, there's magnesium salt, potassium salts, sodium salts, super important today for cognitive performance, but also the function of our immune system, the function of our cardiovascular system. There isn't one cell in your body that does not require an optimal ratio of electrolytes for healthy performance. So, pop over there, check 'em out, drinklmnt.com/model. Now let's get to the Apple Podcast review of the week.

ITUNES REVIEW: Another five-star review titled “My Favorite Health Show” by Roby Ducks. “This show was recommended to me by a co-worker, and I'm so glad I started listening. It is so informative, evidence-based, and easy to understand. Shawn is so motivating and has kick-started my own journey into healthy eating and living.”

SHAWN STEVENSON: Let's go. That's what it's all about. I appreciate you so much for sharing your voice. And popping over to Apple Podcast and leaving me that review, it really does mean a lot to me. And on that note, let's get to our special guest and topic of the day. Our guest today is New York Times best-selling author, Robb Wolf, and he's also the host of a top-rated podcast called The Healthy Rebellion, former research biochemist, and just one of the top people in the field giving us powerful insights into optimal human nutrition, let's jump into this conversation with the amazing Robb Wolf. Alright, we're back. We have a wolf sighting, living legend in the building, Robb Wolf, welcome back to the show.

ROBB WOLF: Huge honor to be here, thanks for having me.

SHAWN STEVENSON: Listen, so I was just telling you about every Wednesday as part of my son's homeschool protocol now, we've been thrust into this life, which I'm actually really grateful for because I get to teach him really valuable things that he can apply in the real world. What a concept, right? And so every Wednesday, we do some type of educational, but also adventurous film, and we call it World View Wednesdays and we kind of all sit around together as a family, and a couple of weeks ago that film was Sacred Cow, and it was tremendously impactful. And he wrote a paper on it the next day as well...

ROBB WOLF: Oh awesome.

SHAWN STEVENSON: And really blew me away with his insights that he took away and he's 10, he's a 10-year-old kid, but he can really see how this stuff works together. So first question, this film, Sacred Cow, what is the premise behind the film and the mission behind it?

ROBB WOLF: Oh man, we had seen a lot of kind of vegan-oriented material come out over the years, and they had a very consistent message about the hazards of meat consumption, animal product consumption from a health perspective. And then more recently, there's been a lot of discussion around this idea that animal products, raising cattle on grasslands and whatnot was this huge contributor to climate change, and then there's always in the background of that then this kind of ethical consideration around should we even eat animals you know, it's just an ethical proposition.

And so Diana and I for a long time knew that we were going to do a book and eventually realized that a film would be a great way to cover this material because not everybody's going to sit down and read a book and you can tackle these complex topics in a little bit more of an emotive way in a film versus doing more of the clinical kind of scientific breakdown that a book is really nice for. The cool thing about laying this stuff out in a book versus like social media or a blog post, you can have some long-form stuff and really create some long ideas and everything. So, we felt to discuss and look into the health environmental, and ethical considerations of an animal-inclusive food system. That's the whole enchilada there, like literally.

And we kind of start things off interestingly, we thought that we were going to dig into the ethic side first, but as we started getting into this story and started doing research, we made some realizations. A couple of the realizations were that it's really hard to grow a human well without animal products, it can be done like a purely vegan approach, and you supplement people with LG oil for EPA and DHA for the brain, and supplemental iron and zinc and...

SHAWN STEVENSON: B12.

ROBB WOLF: Protein concentrates, B12, but it's not the easiest thing in the world. And there was... Right in the writing of this book, there was a fascinating study that came out where they followed very well-to-do... Like average income was over \$200,000, Finnish families that were vegan, and they had 2000 of these, these folks, so they're in Finland, very wealthy Northern Nordic country, high average income there, very highly educated. And what was interesting, these folks were excited about being vegans. There's kind of a joke who will tell you that they're a vegan or a cross-fitter first, and there's a whole funny meme around that.

These folks were super compliant, really excited to share their experiences with the researchers, to such a degree that the researchers actually noted that these folks were super

compliant, very helpful. Nutrient deficiencies were rampant with these folks, iron, zinc, omega-3s, all of the kids had been raised largely vegan. None of them met basic growth standards as far as height. They were definitely not overweight, so that was potentially a good thing, but none of them were at 50th percentile on height, which is usually a sign of nutrient deficiency, usually, when humans are well-fed, they tend to be tall and robustly built and all that type of stuff.

So, this was something that was interesting to us, we were seeing hints of this in the literature that a vegan or very, very minimal animal product-based diet for a mom is difficult, for a baby in utero is difficult, once the child is born is difficult because the breast milk is oftentimes so nutrient deficient. There was an example of a French mother whose breast milk was so nutrient deficient that her baby died from nutrient deficiency, she was vegan when she was breastfeeding, she was so nutrient deficient that the baby died from this. I mean, it's terrible, but there are these examples that pop up.

And so we started kind of looking at this in a different way, if it's hard bordering on impossible for a super-wealthy, highly educated group of people to raise their kids without nutrient deficiencies on a vegan diet, how ethical is this to recommend to a general population, and what does this mean for at-risk populations, people living at the margin, where one of the biggest features that distinguish like, say, academic success versus failure, is access to these nutrient-rich foods, brain development and stuff like that.

So that was interesting, it started changing the questions, historically, the ethics was just around, are things being killed? Yes or no.

If they are killed, like, how does it happen? What's their life like? And all that stuff. And that's all still important. But we started getting this, like, if you literally can't raise a human or it's very difficult to raise a human in a household that earns above \$200,000 a year, and everybody's got a Master's degree in something, and it's hard to feed them on a vegan diet in a way that the kids aren't nutrient deficient, what does this mean? What does that ethically mean for the rest of the story? And then when we really started digging into the land-use side and we started uncovering the reality that without animal inputs into farmland, the land dies, like, you know, some amount of rotational grazing, like if you grow wheat in an area, okay, but you should probably have some animals involved with that because it helps to re-nutryfy the soil, it expands the soil microbiome.

We know for a fact that the application of synthetic chemical fertilizers and herbicides and pesticides is damaging to the local ecology. It's very damaging to the soil microbiome, and that causes all kinds of problems. And really, at the end of our analysis on that, it seemed like it was hard bordering on impossible to have a food system that could last 5000 years without animal

product input, without animals playing a role in this. And part of what we... It was interesting is kind of a one-off example, but Diana became aware of this vegan family, they were vegan, and they decided that they wanted to start raising their own food, so they bought a farm and they started raising their fruits and vegetables, but then what they noticed was that they were totally reliant on either synthetic chemical fertilizers or these... Like, buying basically fish meal to put the fish meal in, and they're like, "Well, that's not really vegan." And what they figured out is that they needed animals as part of the farm to make it a closed-loop system.

So, they got some cows, and they got some pigs and they got some chickens and they started raising them. And then they started asking the question like, do we just raise these guys until they die and then we get new animals or do we actually start eating some of the animals? So, what ultimately ended up happening is they started raising and growing... You know, breeding the animals and they would eat only the animals that they raised, and then what was kind of wacky about that though, is that these folks were part of a vegan restaurant setup, and their financial backers kind of freaked out that they were now eating meat and had this whole story to tell. So, Diana had interviewed them up until pretty early in the film development, and then they just wouldn't return her calls after that, because they didn't want this story being told about this family shifting from vegan to basically being like, 18th-century farmers or they're integrating this whole thing.

But we had this ethical side of can you raise humans without animal products? And then we had this kind of consideration around, can you even develop a food system without animal input? And it didn't seem like you could. You're not going to grow... Like, people will say, "Well, we can just grow meat in a vat," you know, lab meat. And they don't understand that you have to go raise corn and soy and all these things, have them processed and then turn that into nutrient media to put into a vat to grow it. You know, it's like you don't get rid of industrial real crop... Food systems doing that. And so, it changed the whole ethical story a lot. Like, you maybe can't grow humans without animal product inputs, and we maybe can't have a food system that would go on indefinitely, like, when we're talking about sustainability, we need to build something that if you came back 5000 years from now, the ecology is as good or better than it is now. The food production is as good or better than it is now.

The humans involved in that system are as healthy or healthier than we are now. Hopefully healthier, because by and large, we're not all that healthy right now. And so, it was interesting that then when we circle back around to the legit ethical consideration and yeah, we need to talk about death and the right and wrongness of that and the fact that there is no bloodless food system. Like, if you want raw crops as far... Of corn and soy, as far as the eyes can see, you're going to kill a ton of things in that process, you know? And herbicides, pesticides, combines, just...

SHAWN STEVENSON: Rodents.

ROBB WOLF: The rodents, I mean, just on and on. There have been pretty good studies that suggest that you kill far more animals in that system than you would a very meat-centric like, grass-based food system. So that's how we circled around this whole thing, you know? And that was kind of the original imperative for why this thing needed to... You know this book and the film needed to be done, and we really tried to get this stuff right, like, there were painful parts of the story that we wish had gone differently. Like the reality that pastured meat isn't that much different nutritionally than conventional meat. Pasture dairy is much more nutritionally dense, pastured eggs is more nutritional, wild-caught fish is more nutritionally dense, but man, cows and sheep, and stuff like that are just remarkably good at taking low-quality food inputs and turning them into super high-quality nutritious food.

And so, this is one of those inconvenient things that we were like, "Man, this is going to be tough, we're going to get some blowback for this," and we did, but we really tried to be as objective and let the science take us where it would. But we had to cover all three of these topics, because when you start discussing health in like an online format or like a debate or something. You can make some pretty good progress, but then inevitably the person will say, "Well, what about the environment? What about the ethics?" And so, it becomes this game of whack-a-mole, and you have to be able to integrate them all together. And what was interesting to us was that a decentralized animal-centric model was the thing that provided likely the most food, the most nutrient-dense food.

Had the lowest death burden, like you killed the fewest animals, interestingly, relative to this other stuff, and it arguably might be the only system that really is legitimately, long-term sustainable that you could come back literally 5000 years from now and this food system is still working. And we have some examples of stuff like that like there are farms that have the ownership trace back 1800 years in Scotland, and in different places in Ireland, there are some closed food loop systems in Southeast Asia and whatnot that are plant-animal inclusive, and so we have examples of this stuff where these systems haven't destroyed their local environment, it doesn't really address the idea around greenhouse gas emissions and whatnot, and we do get into that stuff and we can talk about it if you want to dig into that, but that was the big challenge.

The big topics, and we didn't go into it expecting to have the ethical story propped up by the human nutrition and also the environmental story, that a regenerative model was kind of the only ethical way to feed humans and was the only ethical way to maintain the planet around us so that we can grow food.

SHAWN STEVENSON: Yeah, yeah. It's profound. And when you said whack-a-mole, that really hit it on the head, literally.

ROBB WOLF: Yeah, literally.

SHAWN STEVENSON: Because folks don't think about... And there's great examples in the film as well, if you're just trying to grow a lot of lettuce, as in a lot... Not just a lot.

ROBB WOLF: Right.

SHAWN STEVENSON: But a field of lettuce, you're going to have to proactively kill a lot of animals that are going to be trying to feast on your lettuce or you're just not going to have lettuce. So, they had these great examples, and we just don't think about those things. We don't think about what's going into the food that we're getting oftentimes, because we're so disconnected from it as a society and our ancestors, we have great lineages of folks, generations before us who were thinking about generations to come and implementing things in growing food or hunting or strategy, whatever it is, thinking about two generations ahead, for example, like some Native American cultures. In our society right now, if we really think about this, we are actually genius at growing a lot of food at one time, all of these different industrial chemicals and fertilizers it's... They work amazing.

ROBB WOLF: It's a miracle. It is.

SHAWN STEVENSON: It is a miracle, however, and that's the other side of it. We can grow a lot of food at one time, but we're going to be destroying, utterly destroying the topsoil, and we don't think about the fact of the microbiome is this big part of our Lexicon now, but there is a microbiome of the soil itself that has a direct relationship to your microbiome and the food that you're going to be getting. And so, if we're proactively just not thinking about the fact that we're tearing it down, and you provided so many great examples in the film and also again, there's the book that goes along with this, but of basically creating these food deserts. Not like in the conventional sense, today, where it's like a neighborhood that doesn't have access to high-quality food, but literally just destroying the soil, and it's just turning into a place where you can't grow anything.

ROBB WOLF: Right.

SHAWN STEVENSON: And repeating that process, finding a new place to destroy, because we're pulling animals out of the equation, which throughout evolution period, human evolution, as far back as we can see, that is how sustainable environments were. And so, this is what I want to ask you about next in that context, because again, I remember even being in

school and having these ideas thrown my way about cow farts and cow burps, are like tearing a hole and the ozone layer.

ROBB WOLF: Right.

SHAWN STEVENSON: These cows are going to kill us, this whole thing, and the crazy thing is, but I don't know if you know this as well recently, but the ozone layer is like "Healing itself."

ROBB WOLF: Right.

SHAWN STEVENSON: With the advent, there hasn't been a reduction necessarily in growing cattle, if anything, it's been more and these factory farming practices. So, what's going on there? Well, actually, we're addressing some other things that are really more of the culprit, but... So, can you talk about that a little bit? That idea about cows being one of the underpinning aspects of destroying the environment versus them being a solution, ruminant animals in healing the environment.

ROBB WOLF: Yeah, I mean it's crystal clear... Or maybe not crystal clear, but the evidence suggests that the planet is warming and that sea levels are rising like ice caps are retreating. So, we were talking about you and your son were watching like some like science-oriented shows every once a while you'll check out a show that talks about ancient Greece or ancient Italy. And what's interesting is the ruins that they find are underwater in the Mediterranean Ocean, right off the coast of Greece and Italy and whatnot, 'cause the sea levels have risen over time. The planet's warming up, one thing that's worth mentioning though is they describe the period of time that we're in currently, is the interglacial period, it's the time between glaciers.

The planet tends to be glaciated more than not, we're kind of lucky that it's not covered with glaciers all the way down to like the border of Mexico and the United States, and a similar deal coming up from South, 'cause there's not a whole lot of land to live on and it's very harsh environments, but sea levels are much lower in those environments because a lot of water gets locked up in ice.

The Netherlands are an interesting example where sea levels have been rising for 400, 500 years, and two-thirds of the Netherlands are below sea level. They've just been building dikes around themselves over time as sea levels rise, and they've been working to stay ahead of this stuff. So, it's not super controversial that this stuff is happening. What is more controversial is this idea that biogenic sources of greenhouse gases like carbon dioxide, methane, even water is a greenhouse gas, and what happens in this scenario, is certain types of gases when sunlight shines through it, some gases like oxygen, the light shines through, the oxygen doesn't absorb,

or nitrogen doesn't absorb heat specifically, and the heat... The light shines on the earth, heat radiates back out into space and there's just kind of an equilibrium there.

It's similar to the inside of a car getting very, very warm in the summer. Glass has this interesting characteristic where it will let sunlight through, but infrared radiation, heat, it doesn't let back out very well. So, the light shines in, the car seat and the interior gets hot and re-radiates heat as infrared radiation because infrared is a shorter wavelength than the regular visible light, it can't get out of the window very well, so the heat will accumulate. And so an 85-degree day, you could have a 130-degree temperature inside of a car. That can and does happen in our atmosphere, and there's this fear that the release of things like methane and carbon dioxide is going to heat the earth, and it almost certainly is at least a part of the story.

The problem with this though is that cows are part of a cycle. So, when a cow burps and it releases methane, methane is a carbon atom with four hydrogen atoms attached to it. That carbon came from carbon that was part of carbohydrates that were part of a plant, that was growing not that long ago, and that plant via photosynthesis took energy from the sun and removed carbon dioxide from the air to make protein, lipids, and carbohydrates that then animals eat, like cows, and then the cows either burp that out or it becomes part of the carbon of their structure, their fat, and protein, and then maybe we eat that. But the source of biogenic greenhouse gases really needs to be accounted for differently because it's a cycle.

Once that methane goes into the atmosphere, and methane is definitely a more potent greenhouse gas than carbon is, or carbon dioxide is, but it's only got a life span of about 10 years, and then it gets cleaved into carbon dioxide and water, and then it's back into the regular carbon dioxide carbon cycle. But this carbon gets released in the atmosphere, it gets brought back into plants, those plants get eaten or the plants die and mulch and then are released as carbon dioxide themselves or potentially methane. But all of that is part of a long-term cycle.

The thing that you really want to look at is things like fossil fuel use, where we're taking carbon that has been underground for hundreds of millions of years and we're releasing it en masse. And this is one of the ironic things about regenerative agriculture, and this is one of the weird things about this whole climate change topic. NASA released this report that as carbon dioxide levels have increased, the planet has gotten more green 'cause plants grow faster. One of the rate-limiting steps of plants growing is the amount of carbon dioxide in the atmosphere. And like people growing anything from marijuana to ornamental flowers have known for a long time, that if they trickle a little bit of carbon dioxide into their greenhouses, that it will enhance the speed with which their plants grow. So, plants are growing faster and absorbing more carbon dioxide out of the atmosphere. And then there's this piece of this whole regenerative

ag story, which is that in grasslands if you have plants and animals interacting the way that they have throughout all of history, the roots of plants stick a lot of carbon underground, and it's possible that we may be able to sequester and remove carbon dioxide out of the atmosphere and actually rebuild topsoil as part of that process.

And I know I bounced around a bunch of different things there, but the notion that the carbon that comes out of cattle in the form of either carbon dioxide or methane is a primary vector of climate change, one that people within different circles in the media have said the cattle contribute as much as 78% of greenhouse gas emissions. It's not remotely close to the right number, it's more like 2% of total greenhouse gas emissions. But that 2% is part of a cycle. It goes out, it comes in, it goes out, it comes in. And it's worth mentioning that if we removed all animal husbandry from our food systems, we would still need to raise other stuff. We'd have to raise other greens, other legumes to replace the meat that we're not consuming, and it would only reduce our total carbon footprint by about 3%.

So, if we got rid of all animal husbandry, and even that I don't know that I fully agree with, because I think that in holistically managed animals, there's this potential of reversing desertification and improving the carbon capture of grasslands. And some of that stuff is still debatable and maybe it's not as powerful as what we think, but for sure, we can reverse desertification and we saw that as part of the film, like the rancher down in the Chihuahuan Desert that has reversed a million acres of desert and turned it back into grassland. So, this is area now that is highly productive and all these animals have returned to the area, different bird species. It's worth noting that the Audubon Society has become a huge advocate of regenerative agriculture because they noticed the return of bird species in these areas where regenerative ag practices occur.

SHAWN STEVENSON: That was one of the most remarkable parts of the film, for sure, to see that a desert could be reversed into a place where potentially, again, we can have food growing.

ROBB WOLF: Right.

SHAWN STEVENSON: We could have... But also, if we take animals out of the equation, if we just look at how things have gone throughout our evolution, this is the natural process of things, and keeping the soil that we do have that's healthy, keeping it healthy, so we're not messing up more stuff that we then have to try to fix, so this is where animals come into the picture. But another big aspect of this is, you mentioned this, so the ozone layer is "healing" itself, but then we have other potential environmental issues going on with the warming of the planet. And I love that analogy of light... The green... If we think about the greenhouse

effect, and I love the analogy with the car, for example, we've all experienced that on a hot day. We get into our car and we're just like baking.

ROBB WOLF: Right.

SHAWN STEVENSON: And also, have you ever left a water bottle in the car, plastic water bottle in your car, and it's gotten warmed up, and then you could taste the plastic?

ROBB WOLF: Right, right.

SHAWN STEVENSON: Which is a whole other thing because plastics don't even biodegrade really, they photodegrade. And so, even light can break them down, especially heat.

ROBB WOLF: Right.

SHAWN STEVENSON: And so, we're drinking a little plastic tea. But that's neither here nor there. But being able to see this process firsthand and what we can actually do to help turn the stuff around, so if you could, could you articulate just a little bit about what regenerative agriculture looks like? Because I saw in the film, they were actually moving animals around, using technology instead of what would happen through our evolution which would be other animals helping to guide them, food sources guiding them, predators guiding them, using technology to guide them.

ROBB WOLF: Yeah, so that's a really important piece that I oftentimes forget to mention. People are like, "Well, why is this stuff important?" It's kind of funny, there's kind of two camps out there. One camp is this kind of "leave it alone" camp, which we shouldn't have animals on pasture, we should just let it lie fallow, let it return to nature, which ironically, returning to nature is having animals on it like two-thirds of the planet's landmass is grasslands, and many of the grasses only propagate if there's fire, that's part of their seed disperse whole thing. And then many of them only propagate if they are... If the plant is eaten and the seed goes through the digestive tract of an animal. So, on the one hand, people look at, say like some downsides of animal husbandry, like nitrogen spillover into waterways, because we raise so many animals in confined areas that their urine and their feces have high nitrogen content that can end up in waterways, that can cause these blooms of algae that sucks all the oxygen out of the water and it can cause fish to die off.

Like, there's this huge area in the Gulf of Mexico that is killed each year due to this nitrogen run-off. In the past, our farms were small and decentralized and all that nitrogen stayed on the farm, that's what we used to grow next year's crop instead of having this stuff kind of spill away. But people will say, "Well, we don't want these animals creating this problem so we just

shouldn't have them," and that's one thought. And the other thought is that just let these animals go do what they do, and we don't really need to manage them, just stick them on grasslands. And what that has done in the past has led to overgrazing, particularly when we start putting up fences and the animals can't move around, and when we kill off predators. The way that grazing animals, cattle, in particular, things like bison and cattle, they tend to bunch together, and they do that so that they protect the bulk of the members of the herd from things like wolves and lions and other large predators.

Once you remove those large predators, there's a tendency for these animals to just kinda go where they want to go. There's just not the predator-prey interaction. And what you will end up with in that scenario is that if you put cows onto pasture, and really it's any type of grazing animal, but you put these animals onto pasture, they'll eat the things that they like, and they have a tendency to like certain types of forage more than others, and then they'll kind of move around and eat the other forage, but then when that fresh... The forage that they ate maybe a week ago starts growing back, they'll come back and eat that again, and that will cause the plant to die, and it'll kill the root system and the area can get over-grazed and it can lead actually to desertification.

So, an area of grassland can turn into a desert by over-grazing it. It can also turn into a desert by under-grazing it. And because people, right or wrong, aren't comfortable with releasing large herds of wolves or mountain lions or other apex predators to keep these animals in check, what we need to do is move them around using things like portable electric fencing, so that when they hit an area, they eat everything, because the animals are competing with each other.

And then when they've eaten everything in an area, they may only be on there like a day, a half a day, and then you open up another section of grass and they move on to that next section of grass. And the area that the animals were just on gets peed on and gets pooped on, and with these holistic practices, you don't deworm the cattle typically, or even the horses, because the dung beetles play this really critical role in disseminating the nutrients out of the dung back into the soil and part of the microbiome, the soil microbiome. So, it's kind of crazy, but there are actually little beetles that play with poo, are this critical feature of a healthy grassland and ecosystem. But this is where we can emulate the predator-prey interaction that has kept grasslands healthy for hundreds of millions of years, and we can do something like that using some technology, like satellite imaging to tell when different areas of grass is ready to be grazed or not grazed, and then we can use portable electric fencing that is solar powered so that we can move the animals around and have them eat the grass that is the most appropriate to be eaten at that time and keep it as healthy as possible.

And also, it tends to really dramatically increase the productivity of that land. Like Joel Salatin, he gets about five times more cattle per acre on his land than the people around him because of the way that he runs things. And so, he doesn't need an operation that's five times larger, he gets five times more productivity out of the area that he has. And this is also one of the things it addresses scalability. He lives in Virginia also, which is very amenable to food production. It has a pretty modest climate. The winters are not super severe. They get some snow, but it's not like Montana where the ground freezes and stuff like that. So, you don't get the same scalability everywhere, but virtually anywhere that you can run animals on grass, you can get better productivity at some point by holistically managing them and better managing their forage.

SHAWN STEVENSON: Yeah, and the education is the key, because these other farmers, they just simply don't know that they can be yielding better results. And this is why this film is so important and of course, the book as well, just to get educated on these things. Because, again, ultimately, yes, we want to be as healthy as possible, but we require food for that. And also, if we're thinking about future generations, we need to take care of our soil. We need to take care of the land that we do have. And now to know that there's ways that we can actually potentially heal the soil, heal the land to be able to then grow more and better food is really inspiring. But instead, we'll just order an Impossible Burger.

ROBB WOLF: Right, right.

SHAWN STEVENSON: Now, this is not a knock. I don't want people tripping if they're a big fan of Impossible Burgers. But if you look at the underlying reason behind it, it's these reasons that you then are addressing, the health aspect which you address, is it the ethical side as well which we don't think about even if you're growing plants, all the animals that have to die in that process. And also, first of all, if you really think about this, and I know this, I think you as well, but I dedicated... I've done all kinds of protocols. I'll take years at a time at a clip and do a ketogenic protocol, a vegan protocol, raw food protocol, I only ate raw plant foods for a couple of years, very, very early on, before the Model Health Show existed, and just to see what happens.

What I found is that most stuff works for a while, but it's always about dialing in what your body needs right now. But in that, I was searching for a burger replacement. There's something about a burger in our culture that we're constantly searching for. And the crazy thing is if you don't want to eat animals, then stop fiddling with the burgers. Kind of like you're trying to trick yourself when you're still infatuated with a thing. It's kind of like Kanye losing Kim Kardashian, then getting a woman who looks just like her.

ROBB WOLF: Right, right.

SHAWN STEVENSON: What are you doing, Kanye? So, can you talk a little bit about that, not about Kanye, unless you want to, but about this process of jumping to the Beyond Meats, the Impossible Burgers that requires so many highly processed ingredients just to be able to make them? We don't think about that aspect as well.

ROBB WOLF: Yeah...

SHAWN STEVENSON: Whereas for some folks, this can be a temporary thing, like a burger every now and then, but they're... As you know, most folks are like, they're leaning into being a processed food, vegan or vegetarian protocol.

ROBB WOLF: Right, right. Diana and I have been talking about this for a while, but it's... I think it was like four years ago that I mentioned that people like Bill Gates and others in the tech scene want to drive the future of food like software. They want it to be IP, intellectual property that's owned. And when I was mentioning stuff like that four years ago, people thought I was nuts. "Oh well, what are you talking about? Where's your proof on that?" It's like they say it. Bill Gates is on record saying that many of the backers of the Impossible Foods, they've said, "We want to run this like a software company. We want to own the intellectual property of the food that people eat." And then COVID hit, and then all kinds of shenanigans happened. "Is it a lab leak? Is it not a lab leak? Is it... Does the vaccine stay put where it goes, or does it actually go systemic?" All these different things. And suddenly, I don't know if fewer people are, I want to say it the other way, if more people are open to the notion that there might be some shenanigans going on behind the scenes, or if the people who are open to the notion that shenanigans are going on are way more vocal about it.

I don't know if people's eyes have been opened or if people are just crankier about it now, but when I mentioned that there is this kind of globalist elite push towards a food system that is owned lock, stock, and barrel from the production side like Bill Gates is the largest owner of farmland in the United States now to the intellectual property of the type of food that we eat, so like Impossible Burger and Impossible Sausage and all those stuff, the process of turning raw materials into that is an IP-owned entity. And from like a James Bond super-villain perspective, it's f*ck*ng genius.

Own all the land, own all the patenting and processing of converting food, real food, into this kind of fake food, and then own the branding around this hockey puck that kind of looks like meat and smells like meat and even kind of bleeds like meat, own all of that stuff. It really is brilliant from just kind of a capitalist wet dream kind of deal, but the thing is, is that initially Impossible Foods touted itself as being healthier than regular meat, and they just got absolutely taken to task on that because it's a highly processed food, even in animal feedings,

the animals get sick eating too much of it 'cause it's full of bad fats, processed pea proteins and all these things that maybe aren't terrible for you in modest amounts, but it really shouldn't replace staple foods. And then there was this claim that they were more sustainable, and this was just an amazing moment where there was a life cycle analysis for Impossible Burger, and a life cycle analysis is trying to look at literally every input and every output for something, so...

How much energy is consumed by the trucks that drive the fertilizer to the farm that raises the soybeans that get converted into the soybeans. And when those soybeans are harvested, they go to a facility that houses them, how much energy is consumed keeping the facility, not too hot, not too cool. And how much energy goes into the pesticides to kill the mice that try to eat the soybean. It's this massive project to do a life cycle analysis. But they looked at the full life cycle analysis and also the carbon footprint of this impossible burger. And then a couple of years after that, a life cycle analysis was performed by the same company, this company, Quanta's, that does these life cycle analyses. And they did it for the White Oak's Pasture Burger. And what was fascinating about that is the White Oak's Pasture Burger was actually net carbon negative. It took more carbon out of the atmosphere than what it released, and it was exactly the amount that was released by eating, by the production of an Impossible Burger.

So, to be carbon neutral, you could eat one Impossible Burger and one White Oak Pasture Burger and you were carbon-neutral, or if you just ate the White Oak Pasture Burger, you were carbon negative and you were pulling more carbon out of the atmosphere than what you were releasing by the consumption of that thing. So that's where these Impossible Foods and Impossible Burger, the lab-grown meat, all these things have been sold as like these sustainability options and these ethical options and everything. And it's an absolute lie. Most places that you go, when you buy gasoline, it will say it contains up to 10% ethanol when you're buying your gas for your car. It was many years ago, but there was a move to subsidize the production of corn to be turned into ethanol to supplement our gas so that we didn't burn as much oil in the form of petroleum. That's fine, other than the reality that it costs more energy to make a gallon of ethanol than it does to just have the gallon of gasoline. So, it's a boondoggle, it's an absolute boondoggle. It is sold as this environmentally friendly thing, but the people who raise the corn to make the ethanol, don't use ethanol to drive their tractors, they use gasoline because it's cheaper than the ethanol is by and large. And it's more sustainable over the long haul, ironically.

So, this is very similar to the story within Impossible Foods, and like these lab-grown meats and whatnot, what we're talking about for this meat production piece at least is hundreds of millions of acres of land that is heated by the sun, watered by the rain and the snow and the mist. And that these animals have co-evolved with for hundreds of millions of years. And that is there, and we can either use it and use it wisely, or we can let it go fallow and let the land be

destroyed. Or we can pave it over and turn it into a parking lot, I guess. Those are kind of the options that we have with it. But when... It's interesting that Impossible Foods came out of the gate really hard and had these claims around health and they got taken to task for that, then they had these sustainability claims, and it clearly is no better. And it's clearly worse than just basic meat, just standard meat to say nothing of pastured meat. And then it weaves in the ethical consideration there, like is it really cool that like six companies own the rights to producing 95% of the food that's consumed on the planet, which is what we're in right now.

And I'm a big fan of markets and capitalism and stuff like that, but I think that this is an example of where we do really well. The thing I'm advocating for is that there should be a whole bunch of people that raise and grow food, not six people. And this is the system that I'm advocating for, that there should be decentralized... The ownership should be decentralized. Going forward, there's all this concern around what will we as human beings do as AI takes over more and more jobs, like doctoring and lawyering, seems really complex, but really what it is are algorithms. You fall into these different buckets, and it becomes a very algorithmically driven...

Creative problem-solving-type endeavors are arguably the last thing that AI will ever get into. And all the regenerative ag and regenerative food production is about is problem-solving. It is a creative endeavor every day, it is not formulaic. You have to really get out and have a lay of the land and a feel for what's going on in the time of the year, and factor in weather forecasts and all this stuff. It doesn't lend itself to algorithms at all, and so even on a quality-of-life standpoint, you could make the argument going forward that instead of having tens of millions of people out of work and kind of destitute and not really having meaning in their life, they should be working on small working farms and the cooperative owners in these endeavors and have a multi-generational legacy play in these things. This is... We're starting to talk about meaningful human work and a good quality of life, a good wage, earned for the work done, and stable [1:05:48.6] ___ that get blown out of the water with changes in the economy and whatnot.

SHAWN STEVENSON: Powerful, powerful. Got a quick break coming up, we'll be right back.

The importance of Vitamin C cannot be overstated. The big issue today is its simplicity, something so simple cannot be so effective, can it? Vitamin C is obviously a major part of our immune system function and how it does its work, and this is the key, is that it helps to reduce infection-oriented inflammation. A recent study cited in the journal *Pharma Nutrition* investigated the impact of vitamin C in relation to the cytokine activity associated with COVID-19 and found that vitamin C is effective by inhibiting the production of the cytokine storm. Several clinical studies are now affirming that timely administration of vitamin C can dramatically influence the outcome of COVID-19 infections, and this simply has not been talked about, but we're going to change that.

Now, it's important to also note that all vitamin C is not created equal. We've got synthetic forms of vitamin C and we've got botanical, real food-based vitamin C. A study published in the Journal of Cardiology had 20 male smokers consume the number one source, the highest botanical source of vitamin C found in camu camu berry, over the course of a one-week study, and it led to significantly lowered oxidative stress and inflammatory biomarkers. And they were measuring this by utilizing C-reactive protein. Now, here's the rub. The camu camu berry was not just put up against a placebo, it wasn't put up against nothing. It was put up against synthetic versions of vitamin C. Just an ordinary vitamin C tablet that you might find as you're checking out at the cash register or at a gas station, something of the like.

And here's what they found. The researchers saw no change in these biomarkers, reducing inflammation and oxidative stress in the placebo group. That placebo group again, was a synthetic version of vitamin C. For the researchers, this indicated that the combination of other antioxidants from the camu camu berries had a more powerful antioxidant effect than standard Vitamin C products alone. This is why I utilize camu camu berry combined with amla berry, combined with Acerola cherry, the three highest botanical sources of vitamin C ever discovered, in my favorite vitamin C supplement of all time, the Essential C complex from PaleoValley. Go to paleovalley.com/model, you're going to get 15% off incredible Essential C formula. Go to P-A-L-E-O-V-A-L-L-E-Y.com/model, get a special 15% off right now. Vitamin C is of the utmost importance, and our sourcing matters more than ever. Get the very best. Not the third best, not the fifth-best, not the 100th best, get the very best vitamin C possible. That's going to be an Essential C complex from PaleoValley. Go to paleovalley.com/model. Now, back to the show.

Just thinking about that aspect, it's not talked about enough. Folks right now, we're not just dealing with multiple epidemics of chronic disease. We're dealing with multiple epidemics of mental health issues as well, and a loss of a sense of connectivity, community, sense of purpose. And there's study after study affirming how these things affect our life span and our healthspan, just even being connected to meaningful work, you know? And so, I think there's something to be said for reconnecting to something very primitive with humans, which is having a hand in where our food is coming from.

ROBB WOLF: Yeah.

SHAWN STEVENSON: Being able to feed ourselves, and I think that that's going to be something that is going to become more present as we move into the future, and we have... We're knocking on the door right now, we've got 8 billion folks, 8 billion human beings on the planet, six companies feeding everybody. Something doesn't sound right. [chuckle] You know? Again, coming from where we come from, where each tribe, this collective thing, not to

mention, even if we get a little bit closer to today, we have the local farming of our food and a diversity, right? Whereas, today, it's this very cookie-cutter... It's so much marketing and politicization of what humans should be eating. And oftentimes, again, just... I'm a big fan of results, look at how we're doing right now...

ROBB WOLF: Right.

SHAWN STEVENSON: With... In America right now, we're knocking the door of about 250 millions of our citizens who are overweight or obese. And I think... This was prior to COVID, by the way. I know that COVID has just come in and kind of...

ROBB WOLF: Kicked it right in the jimmy, yeah.

SHAWN STEVENSON: Exactly. Get it going right to that next level. Again, thank you so much for putting your time and energy into this project, because when we started this episode, and you mentioned the fact... Like, we have a Netflix society really, we have a Netflix kind of driven cultivated society where a film might just be the thing...

ROBB WOLF: Right.

SHAWN STEVENSON: That can galvanize folks, and also, it's so much more consumable in the way that we see things, but then you have the book where you do the deeper dives, and you can really articulate things to another level. So, can you let everybody know where they can pick up the book and where they could check out the film as well?

ROBB WOLF: Yeah, so you can go to sacredcow.info and the book, the film, all the resources are there, and Diana continues to release all this amazing material. Like, if people ask you a question, if you're wondering about this stuff, like, do cows consume way more water than what is good? Like, we have resources that talk about that and peel back the details and look at the nuance, so that's definitely where folks want to go.

SHAWN STEVENSON: Alright, perfect, perfect. And really, again, anywhere books are sold as well?

ROBB WOLF: Yes.

SHAWN STEVENSON: And also, we want... It's on Amazon Prime, you can get access but definitely go to the website, is going to be ideal.

ROBB WOLF: Yeah. It will just tell you where you can get it. Like, I know you have international listeners and there's a few outlets where you can get it, like in Israel and Europe and whatnot. Yeah, yeah.

SHAWN STEVENSON: Perfect, perfect. Well again, Robb, living legend, I appreciate you so much for taking the time to hang out with us, and I can't wait to see what you do next, man.

ROBB WOLF: Huge honor, thank you. I'm just hoping we motor through this next year and no missiles flying, and no new pandemics are released. And we just kind of get some breathing space, you know?

SHAWN STEVENSON: I mean, you know, a nuclear winter could solve a lot of our environmental issues in a way.

ROBB WOLF: There was a HuffPost piece on that, and you know. This may be worth saying, this may be worth saying. I see this characteristic in my youngest daughter. I can be a very spiteful person, and spite, people may not... They just think that it's being mean, it's not being mean. I'm willing to suffer knowing that my suffering is facilitating the suffering of someone else, and more and more people like me are reaching a point where they're like, "I'm willing to take a hit, just so long as the people that are pissing me off are, I know that they're getting it," And they could get it half as bad as I am, but it's just schadenfreude, like knowing is like, "Well, that asshole's getting it so I'm okay there." And I would just caution people like when they're...

We all need to step away from the abyss and love each other a little bit and give each other a little slack, and because I notice in myself, some days I have that thought. I'm like, "Maybe the comet should hit us, maybe the missiles should fly, maybe that..." When they were doing Gain-of-Function research on SARS-CoV-2, they were also doing it on MERS, and MERS has a 30% infection fatality rate. Maybe that's the one that should have got out, and it's horrible sh*t to say. It's civilization-ending stuff, but there's so much goofiness that goes on, and even if folks don't buy this regenerative ag scene, if they give it a... They kick the tires on them and they're like, "I don't know, I just don't really buy it." That's cool, but at least put some diligence into it. Give it a chance and entertain the possibility that whatever you've arrived at with a world position may not be the final place that you're in. Hopefully, it's not. Hopefully, we all grow and evolve and change and whatnot, yeah.

SHAWN STEVENSON: Yeah. That's what I... I think this time is... It's offering up a big opportunity, and by the way, when I said that about the nuclear winter, you posted on your Instagram, this was written in HuffPost. The title of the article was, "Could a small nuclear war reverse global warming?" Just sprinkling in a little bit of idiocy, 'cause he has nothing else

better to do, but this is the place that we're at. We get to see idiocy at an entirely new level and hopefully, we can choose other than.

ROBB WOLF: We're doing a proctology exam on idiocy right now.

SHAWN STEVENSON: Getting very intimate with it.

ROBB WOLF: Think very intimate with it, yeah.

SHAWN STEVENSON: Well again, thank you so much, Robb. I appreciate you, one of my favorite people, man, and talk with you soon.

ROBB WOLF: Thanks again. Take care, bye, bye.

SHAWN STEVENSON: So many important nuggets to take away from this episode. Most importantly, getting more involved in where our food is actually coming from, and thinking about the bigger picture, thinking about what we're passing on for future generations, and also thinking about who is moving the chess pieces around on the chessboard, determining what type of food we're actually getting and how all this stuff is taking place. To hear that Bill Gates owns the most farmland here in the United States, that doesn't sound suspicious at all. Keep in mind, Bill Gates is the same individual that's now funding a project to spray a cloud of chemicals around the Earth itself to help to block out sunlight, to help to cool the planet down, to reduce global warming, the thrust of this mission, and this is a real thing, to put a protective layer around the Earth, basically, that is generated by spraying out these chemicals around the globe. This is a real idea as if he's Tony Stark or something to put a protective belt around the Earth using technology essentially, but this story sounds so far-fetched, but it is a real thing. As a matter of fact, listen to this report from CNBC.

Bill Gates is backing the first high altitude experiment of one radical climate change solution, creating a massive chemical cloud that could cool the earth. It's called Solar Geoengineering, and it's highly controversial. It would look something like this. Thousands of planes would fly very high and use nozzles to inject millions of tons of light-reflecting particles into the stratosphere, it would create a thin chemical cloud of those particles around the whole planet, blocking some sunlight from reaching the surface. It would mimic a giant volcanic eruption, which we know cools the Earth.

SHAWN STEVENSON: Now, when you have these harebrained ideas, you don't think about the wider ramifications. For example, if less sunlight is able to make its way to the surface of the Earth, specifically being able to reach the human body, what then happens as far as the production of critical internal chemistry for human health? For example, UV B rays, of all the

UV light that's reaching from the sun to us, we've got UV A, UV B, and UV C. UV C is essentially just blocked out by the ozone layer, but it has the most energy, shortest wavelength. UVA has the longest wavelength, but the least amount of energy, that's what's predominantly reaching the surface of the earth. Of all the sun rays that reach us, 95% are UVA, alright? And this is how you get a tan, but UV B, about 5% of all the sun rays that reach the Earth is in the form of UV B, this is what is the catalyst for making vitamin D, which is a critical steroid hormone that the human body needs to not just survive but to thrive.

And as a matter of fact, if we are thinking about how our manipulation of the environment is that affecting our vitamin D status, well, a study published in the journal Nature Reviews Endocrinology, determined that air pollution can be a causative agent in vitamin D deficiency, already just what we're putting out into the environment with the way that we're living our lives, let alone, but these guys are not thinking about that, they're not thinking about how critical vitamin D is in reducing your risk for cancer and reducing your risk for infectious diseases, because a study published in the BMJ, one of our most prestigious medical journals found that COVID-19 ICU risk was 20 times greater in people who were deficient in vitamin D.

This is well established, now we've got about two dozen-plus studies that are identifying this specific issue as being a major risk factor. Another study found that simply lifting up our vitamin D levels can be an effective treatment for recovery from SARS-COV-2. This study, again, published in the BMJ, it's a separate study, was a randomized placebo-controlled study that gave patients with SARS-COV-2 short-term, high dose vitamin D for just seven days, and gave another group of SARS-COV-2 patients a placebo. Here's what happened, a greater proportion of the vitamin D deficient individuals, by the way, everybody was vitamin D deficient coming into it, a greater proportion of vitamin D deficient individuals with COVID-19 infection turned SARS-COV-2 negative faster with a significant decrease in inflammatory biomarkers by getting high dose vitamin D3 supplementation. The amount used in the study was about 60,000 IUs daily for just a short time period, but it helped people to clear the virus faster. And why is it? It's a catalyst for so many different immune parameters in the human body driving and controlling different expressions of the immune system, whether it's identifying and eliminating rogue cells like cancer cells or infectious diseases, pathogens in the system, it makes the immune system, it's a driver, primary component of driving immune system function.

What happens when you block out the sun with the chemical spray? When you're spraying out around the globe, what happens? Is that really the solution? Is that really a smart idea? What are the long... It's trying to target a short-term thing, a short-term issue, one issue, and creating a thousand more issues, that's the mentality that's tending to reign supreme at this moment, but I'm... As Robb was mentioning at the end there, being a bit cynical, but also again, he's a very optimistic person, but just kind of kicking these ideas around that, "Hey, maybe this is

what needs to happen in order for us to wake up, in order for us to understand that there are so many different things that we've allowed to take place, that we've normalized that are destroying our families, that are destroying the human race period, we're not doing well." Superficially, we think that we're so evolved, but we are now the sickest, most chronically diseased society in history, the most sedentary culture in the history of humanity, the most obese society in the history of humanity. Something is clearly awry, something is off here, and these times might just be the catalyst, the launching pad for us to help to turn this stuff around, and I know that we can, but this is why education is so important.

And also, for us to maintain a level of healthy skepticism in questioning who's controlling what you see, who's controlling what you do, what you have access to in the first place because it's not an accident that censorship has become so prevalent at this time. Here in the United States, the first amendment, the very first amendment is that of freedom of speech, and we can say that these different tech companies are doing what they want to do because it's their own entity, and it's their own intellectual capital, but in reality, these entities are 1000% working along with our government and also just government regulation has its hands all up in there, alright? All up on all these different social media platforms and these big tech platforms and collecting our data, so much has come out about, of course, just this illegal tracking of our citizens, and now censorship is rising to the forefront, people are... Maybe, again, it had to get this way so that we say, "You know what, I don't need you to regulate what I'm seeing and what I'm not seeing, I am an intelligent human being and I have the ability to question things and to think critically, I don't need you to spoon-feed me what you believe the truth is," which ultimately, I'd say a good solid 99% of the time, the truth is going to have a myriad of different expressions, it's not going to be one flavor.

Because even with these different peer-reviewed studies, especially observational data, we can shift the narrative around to fit our approach, and it's rare that you're going to have someone that is coming into it understanding their bias, "I'm understanding my bias," and then looking at the data and thinking, "Okay, how am I wrong? Let me look at this through the lens of somebody who would think the opposite of me." They're coming into it looking at the data like Vitamin D doesn't matter at all, it's just something Ludacris talked about in a song, he's talking about giving the vitamin D, alright? Has nothing to do with our health and wellness except... Never mind, but this is what could be happening, and I can look at it through that lens that, "This is... It's not... It doesn't matter," And try and find leverage points in the data to affirm that. I could say, "Well, this is actually... It's done in In vitro; it's not done actually in the real world or on people who were actually managing and using objective measurements, or maybe it's just... It's all subjective, these are just subjective tracking, we're not actually looking at people's blood work, whatever, I could try and find holes in anything, and so it's rare that somebody is coming into it looking at things from multiple perspectives.

And this is one of the reasons why I'm doing this work today, and I really want to impress that upon everybody as often as possible to start to come into things, looking at things from multiple perspectives, and being aware that we inherently think that our way is the way. We think that our way is the right way as a human being because we don't want to be wrong. Being wrong could mean a serious threat to our livelihood, to our life, and also our acceptance into the tribe and the culture, so being wrong bears a big psychological weight for us, that we might not be aware of.

But the crazy part is, the more that we are willing to be wrong, the more often we're actually going to be right. Alright? The more willing that we are to be wrong, the more often we're going to tend to be right because we're coming into it, not just having this strong anchor and planting our flag that this way is the right way and it's the only way, and it's the only truth. And so, working on ourselves, so we're coming into it like that, of course. Now, oftentimes, many of our biases, especially if you have achieved a level of real-world success with your own example, if we're talking about in the domain of health, for example, if you've achieved a level of health and vitality within your own body and you have that experiential knowledge, that bias even holds more weight. We've even got to understand which of our biases hold more credibility. And also, looking towards other people and seeing their experiential out-picturing of what health is, like a Bill Gates...

You put... Put our pictures up side by side! Just say, you know he didn't have the billies, just take that off the board, just two guys. Just say you didn't know me. Two guys. Who are you going to take health advice from? Just based on something very superficial. How is he doing? How's he doing with this? Of course, he doesn't care about getting sunlight! He doesn't care! He doesn't care about vitamin D. He doesn't care about what kind of meat he's eating, or fake meat, or whatever the case is, these concepts are irrelevant to him, and he's going to tell you that outwardly with his persona. Alright. He's going to throw on the sweater vest. Right now, he's rocking the 2X sweater vest. All good, but don't tell me how to be healthy. That's the problem. Alright. And so, he could be working on his health and that would be amazing, and he can get some type of level of achievement and then seek to share his experience as advice, but for right now, my man's devolving. He's turning into one of these lizard people everybody's afraid of, where the aliens are. Now, let me... I'm going to... Let me reel it back in. Alright. We're throwing the fishing line, let me reel it back in.

Billy G is not my lover. Alright. Maybe he's a... Maybe he's an amazing human being. You still got to leave that door open. Alright? See, my bias might be kicking in here, but for me, it's just looking at, now, I'm for real. This is definitely a concern and a red flag for me that this human being is buying up all this farmland in United States. To what end? Not really even understanding what's happening with the soil and with the farmland here in the United States, and really, there's a worldwide issue that's taking place as humanity has been siphoning and

abusing and taking advantage of our planet, that literally... This is the extent of it. Let me share this with you.

When you look in the mirror and you see yourself, everything that you see came from the Earth. Alright? When you're looking at yourself in the mirror, every single thing that you see looking back at you came from this planet. Every cell of your body came from the Earth. The Earth is alive, and you are an offspring of that. You are an example of the vitality of the planet. What happens when we break down and abuse and degrade our planet? We will inherently be degrading ourselves and our capacity to be great, to reach our potential, which, this is the beauty of this whole thing, is that being that we are human beings living at this time, our potential is limitless, but we have to be able to recognize that. And the point is, it's a lot more difficult to recognize that when we're not healthy. It's a lot more difficult to recognize that when we're outsourcing our potential and our belief to the media who has a vested interest in giving us this spoon-fed narrative about how things are, and that narrative is going to depend on which channel you're watching.

How is that? That's not science. That's not science. And you'll very rarely see a narrative disrupting idea on any of these channels. If it doesn't fit that narrative that they've been spoon-feeding you, you can lose viewership, lose stock prices, and ultimately, it's all about the money that's being made behind the scenes by grabbing our attention, unethically grabbing our attention, utilizing fear, because the vast majority of network news is just a constant cycle of fear, constant cycle of fear, and most folks don't realize this, but Harvard did a wonderful report where they were trying to express more transparency in where our major network news funding is coming from. So again, published by Harvard, which, for many folks, they're the top tier of prestige, and what they disclosed was, repeatedly, station after station, whether it's CNN or Fox or MSNBC or ABC, the primary funders for all of them included Vanguard and BlackRock, two massive financial management institutions driven to make money for their investors. Alright.

Is this about efficacy and education, or is it about making money? And you already know the answer to this, but the question is, are you still outsourcing your attention to these folks? And I'm so grateful for this time because this is offering up an opportunity for us to wake up to those things, to sometimes be shaken awake and say, you know what? I choose other than. This is not okay. This is not working for our society. Just take a look around and we can do better. As a matter of fact, we could do a lot better. But, again, it starts with education, empowerment, and sharing this with our communities and the people that we care about, so I encourage you to do that. Share this episode out with the people that you care about.

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