



EPISODE 462

5 Critical Keys To Unlocking More Energy

With Guest Dr. Steven Gundry

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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, got a question for you, could you use some more energy? We need energy to run everything about us. Of course, we think about the day-to-day life stuff, energy to get up and get out of bed and do our work, take care of our family. Energy to do our exercise programs, energy to make food, energy to procure the food in the first place, which there was a time we had to go and actually get out and hunt our food, but today we basically go hunt around in the refrigerator, or we can hunt around on our phone and get DoorDash to deliver some stuff. But even that requires energy. But this is a deeper conversation, because energy is required to run all of the trillions of processes that are happening right now in your brain and body to animate that incredible body of yours to give you life, and one of the biggest energy drivers or energy requirements is to digest the food that we eat, it is an incredibly energy-intensive process because we're taking food and turning it into you.

We're taking foodstuff and turning it into you-stuff, it requires a tremendous amount of focus and energy by our incredible bodies, and this is just one of the pieces of the energy equation, and as you're going to discover today, this conversation about energy is so much more powerful than we've ever thought about before, it's one of those things that I would have people for years coming into my clinical practice and just asking, "What can I take to have more energy, I want to have more energy, what can I take?" And not really understanding the foundational explanation really about what energy really is, and we're trying to treat a symptom of energy with these "Energy drinks," right, "Energy bars," and we're not addressing what energy really is because even within that, we could do blood tests and find out what's going on with certain nutrient deficiencies, and we can test to see if you're deficient in a certain mineral, but we can't test to see necessarily if you're deficient in energy, it is incredibly subjective, but it is real, you know what your energy experience is right now, and I want you wherever you are, to be able to 10x it, to feel even better, because we need that energy right now more than ever to become the best version of ourselves is what the world really needs right now, is more folks stepping into their power.

And so really excited about this episode. This conversation I'm telling you is going to knock your socks off, and it's something I've been really looking forward to talking

about for a long time, I got my hands on some early information on this topic, and it just blew my mind... Couldn't wait. So really excited to jump into this today, and even right now, I don't know if you can notice, I've done probably at least somewhere around 100 interviews for my new book, Eat Smarter, which so grateful became the number one new release book in America when it came out. And over that time, it's been... It's an energy requirement. It's been an energetic pool on my voice even, and so I've been doing things to really... It's just super abnormal to go from writing by yourself for months and months on end to doing so much media over and over and over again, but it's been a joyful experience, but I'm definitely looking at how do I re-calibrate my energy to be able to take things to an even higher level as we go forward, because we've got a big mission ahead with Eat Smarter and just really helping to transform the health landscape of our communities.

So I'm really excited about that, but getting our energy needs met physically, obviously, is going to be a big part of that, taking care of our bodies, getting high quality rest, making sure our hydration needs are met, all these things have definitely helped because, man, like I'm saying 100 interviews right now, just within the last month, month and a half, it's kind of crazy, I can't believe I actually accomplished all that, I don't want to do it again at that kind of pace, but just re-calibrating right now, one of the things that I do every day and you're going to learn about today too, is like that first thing that you have that you're "Breaking your fast with," really has a dynamic impact on your mitochondria because it's one type of fuel rather than a bunch of different types of fuel coming in and potentially clogging up that pathway to fueling your mitochondria, and again, our guest is going to break down what all that means, but for so many folks, they've really turned to utilizing high quality fats, medium chain triglycerides, medium chain fatty acids to fuel their biochemical processes to start the day.

And part of that reason is MCTs are able to cross the blood-brain barrier and actually feed your brain cells, very few nutrients are able to do that, but also MCTs, they bypass, normal, what we call the "Normal system of digestion," and they're shuttled to the liver, and your liver is producing ketones, whether you're all on a ketogenic diet or not, that again, provides an alternative fuel source for your brain cells. So MCTs are really remarkable. But for me, the sourcing matters, you don't want to just get any random company, X, MCT's, you want to make sure you get a high quality sourcing that does everything right in the process from the farmers to the end product. And also, I love an emulsified MCT oil, so it's like a coffee creamer, it's really great to add to hot teas, hot coffee, of course, you can add it to smoothies and things like that as well, but that's one of the things I really do to start my day, I did today, for sure. And I get my MCT oil from



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You get 10% off their incredible MCT oils and also everything else that they carry, they have wonderful protein products, they have wonderful snacks, the snacks are just off the chain, so delicious. But you get 10% off everything that they carry, it's onnit.com/model. Again it's O-N-N-I-T.com/model that emulsified MCT oil is a game changer. Right, so pop over there, check 'em out, and on that note, let's get to the Apple Podcast review of the week.

iTunes Review: Another five-star review titled, “Life-Changing” by Linz 413. “I can't say enough good things about the Model Health Show. The information is well explained in life applicable, I constantly find myself sharing what I've learned with others and feeling empowered with the knowledge to care for my own health. Thank you, Shawn”.

Shawn Stevenson: Thank you. That's so awesome, thank you so much for leaving me that review over on Apple Podcast, it means everything. And listen, if you get to do so, please pop over to Apple Podcast and leave a review for the Model Health Show, and on that note, let's get to our special guest and topic of the day. Our guest today is Steven Gundry MD, and he's a renowned heart surgeon, medical inventor, four-time New York Times best-selling author and Physician Scientist, Dr. Gundry is also the co-founder of Gundry MD, an incredible wellness brand, and the host of the weekly podcast, The Dr. Gundry Podcast. And today, he's back on The Model Health Show to talk about his brand new project, The Energy Paradox, and is definitely going to blow your mind. So let's jump into this conversation with the incredible, Dr. Steven Gundry. Good to see you again. It's been too long.

Dr. Steven Gundry: Oh. It just seems like yesterday I was here, Shawn. Thanks for having me back.

Shawn Stevenson: It's my pleasure, we love having you around here, your new book, as I already shared, is blowing my mind, every page is just dropping an a-ha moment, which you tend to do. And I want to start at the top, let's talk about the title itself, it's very interesting, and even the title, when you broke down why you called it The Energy Paradox, it really just jumped out and made sense, so let's talk about it why the energy paradox. What does that actually mean?

Dr. Steven Gundry: Well, all my books are a paradox, and this one is no exception, most people know they want energy, they don't know how to measure it, and what I found in my research and in my clinical practice for the last 20 years, is about half the people who come to me initially, complain of what we call fatigue and malaise, and their



Get Up and Go has got up and gone as the subtitle of the book says. And what I found that one of the underlying causes is that we are overfed, but undernourished, and if you think about it, we've been taught to get more energy, we have to have energy bars, we have to have energy drinks, we have to be snacking throughout the day to keep our energy levels up and it's actually paradoxically making us make less energy.

And that's one of the biggest problems in our modern lifestyle, we literally are eating. The average American eats 16 hours a day, and we are just constantly overloading our little energy-making organelles, which are our mitochondria with too much work, quite frankly, and we've created this incredible traffic jam in our energy production lines, much like any of us living in Southern California know, that rush hour, nothing moves, and particularly here in LA, rush hour on the 405 can be 16 hours a day where nothing moves, and the same thing is happening in our energy production, we have constantly now been bombarding our mitochondria, the little energy making organelles to handle too much food for too long a time. And part of the book is showing people how to break out of this horrible habit that we've been talked in, to make more energy.

Shawn Stevenson: Right, yeah. And of course, the same thing I was really inundated with in college, which was this idea that calories are energy, if you just... If you want to have a little bit of energy, have a snack, right? And you just mentioned such a good reference, by the way, the name rush hour, we just need to change the name rush hour because it's really hurry up and wait hour, but shout out to Rush Hour, Jackie Chan. Chris Rock... I'm sorry, Chris Tucker.

Dr. Steven Gundry: Yeah...

Shawn Stevenson: Man, but this is such a great analogy because we have all of this access to these high energy foods and also the marketers putting energy into the name, so of course, these energy drinks going to give me energy. Of course this energy bar is going to give me energy, but it's very different from what we've been taught, and if you could, I would love to talk about the fact that... And this was just jumped right out at me, we've began to normalize fatigue, we've began to normalize the need for some kind of superficial energy. Let's talk a little bit about that.

Dr. Steven Gundry: Yeah, the amazing thing is that most people have been led to believe that because of our modern lifestyles, because of the stresses, and certainly the last year has brought on some fascinating stresses that none of us could have



imagined, that this feeling of fatigue, this feeling of low energy is somehow normal and that we need to, you know, boost periodically throughout the day, this kind of low level of normal fatigue. In fact, that's absolutely not true. And one of the things that I go into is, why is this kind of chronic fatigue, this low energy now normalized? And that has to do with because of the way we eat, because of the things we eat. We now have this chronic fire of inflammation that goes on inside of our body, and fire consumes a whole lot of energy, and it's actually the fire of our immune system consuming much of the energy that we would normally produce throughout the day. And this fire is actually what's strapping our energy 'cause there's quite frankly, very little left over besides feeding this chronic fire of inflammation.

Now, most people have heard about inflammation, but it's becoming clear and clear that this inflammation in its source actually comes from leaky gut. And if you had asked me 15 years ago what I thought about leaky gut, I would have laughed you out of the room and called it pseudo-science. We now know, and through the efforts of Dr. Fasano at Harvard and my lab, we now know that almost everyone who has low energy by definition has a leaky gut, and that particles like lectins that I talked about before and pieces of bacteria are leaking across the wall of our gut and our immune system. The same immune system that fights the cold or fights the flu, is using most of our energy to fight the battle that happens from leaky gut. And we're unaware of it.

Shawn Stevenson: That's so fascinating. You just said, so it just hit me in a different way with inflammation and fire-consuming things, right, and so much of our energy really just being sopped up and absorbed by inflammation in our body.

Dr. Steven Gundry: Yeah.

Shawn Stevenson: Wow, that's really crazy. I want to ask you about this idea, which I was just sharing with my older son, this entire paradigm of energy is very subjective, this isn't something we could objectively measure, like somebody's coming in, they're like, Dr. G I've got really low energy. There's not like a test, there's not an energy litmus test per se, but there are pieces and you're really piecing together what that looks like because for example, if somebody's deficient in vitamin D or deficient in magnesium, you could find those things out, but you can't find what is that energy metric? Per se, it's kind of an overarching picture...

Dr. Steven Gundry: Yeah, early in my practice, in the early 2000s, I'd see a number of people



complaining of fatigue and low energy, and they would have standard markers of inflammation. The most common one is C-Reactive Protein. It's capital C, capital R capital P. I call it crap because it actually makes you feel like crap. And I use an example in the book of a woman in her 40s who came in with a couple of autoimmune diseases, but her initial crap was 10, and normal is supposed to be one, less than one, so she was burning up with the fire of inflammation. So we put her on the Energy Paradox Program, and I usually see people back in three months, and when she came back, she was a different person and she said, "Holy cow." I mean, she had lost 15 pounds, which is great. But she said, "I don't know what's happened to me." She said, "You know, I got so much energy. What's going on? I feel great." And I said, "Well, look at this," and I showed her lab, so her crap had gone from 10 down to 2, now it's not perfect, but that's a quantum change, and so she was unaware that her forest fire was now down to a little small during ember and that's another great point.

I can't get over the number of times I've heard, "Well, I need to eat anti-inflammatory foods, or I need to eat anti-inflammatory supplements or vitamins" Let me tell you, with the amount of inflammation that's going on in most people, that forest fire, by eating anti-inflammatory foods and taking a couple of supplements that's like using a garden hose to put it out. So we have to go to the root cause of that forest fire, and that stems back to the fact that most of us, because of our habits, because of our foods, we have leaky gut, and the whole book goes into how this got out of control and how to put the fire out.

Shawn Stevenson: Great, great. It's not just our bodies as well, when we're talking about this energy deprivation, it's the food, it's the very food that we're eating, and you really break down how our food is now lacking complex energy now. And you talk about why that is. So part of this has to do with the soil.

Dr. Steven Gundry: Yeah. One of the things that I've been fascinated with is the more I've studied plants, the more I've been impressed that we are basically a plant that carries its soil around with it. So plants have roots that go into soil, and that soil is actually a complex living system of its own microbiome and its own set of nutrients, and one of the things that's been clear is we've totally destroyed the soil that plants live in, we've used biocides, herbicides, insecticides, we've mono-cropped and so our soil is actually dead, so even though a plant may look like a plant, maybe a leaf of spinach looks like a leaf of spinach. It's nothing like that spinach of 50 years ago. In fact, the US Senate in 1936, almost 100 years ago, said, our soil is now so depleted of nutrients that we could eat continuously and never get the

nutrients we need to sustain a healthy life, 90 years ago, they knew this.

And one of the theories of all this is, we are seeking out nutrients and we keep eating until we get those nutrients, and one of the interesting theories of obesity is guess what, you can eat and eat and eat, and we are nutrient-depleted in all of our food sources and you'll never get them. The second thing that's really exciting is, speaking of the gut, it turns out our gut has the same surface area, the lining of our gut, as a tennis court. And the reason it has such a surface area, 'cause everybody looks down their gut and say, "There's no tennis court down there," is we actually have roots. We have a shag carpet on the inside of our gut. And these roots are called microvilli, and they literally are similar to the roots of a plant. And the soil of us is actually our microbiome, those trillions and trillions of bacteria and fungi and worms, and the food we eat make basically compost, if you will. And our roots go into that soil, and we're turning everyone into a great gardener, and if we take care of our soil and take care of our roots, we will actually increase our ability to extract energy from the food we eat.

Shawn Stevenson: We want to be healthy, robust plants, not necessarily Little Shop of Horrors.

Dr. Steven Gundry: Exactly. Feed me, Seymour.

Shawn Stevenson: So this gets into the conversation... And I love that analogy, by the way, of we really are plants that have gotten up and walking around, and we've taken the soil with us. But I've said this statement many times and I talk about this in my book as well, that chronic nutrient deficiency leads to chronic overeating. Period.

Dr. Steven Gundry: Yeah.

Shawn Stevenson: We have this innate drive through our evolution to seek out nutrients to help our bodies to run processes. Very simple principle, but the more we're eating deficient foods, we might get some substance in our body for a time, but those mechanisms that are calling out for copper, for boron, for magnesium...

Dr. Steven Gundry: Magnesium, yeah.

Shawn Stevenson: Yeah. They're just going to be going off continuously until we get our needs met. And you mentioning that 90 years ago, saying, this soil is already just devastated, and where we are today. Oh, my goodness.

Dr. Steven Gundry: Yeah. As I mention in the book, and this is the US Senate document, it starts one of my chapters. And I actually, when I address a physician group, so I actually put this slide up of this quote from the Senate, but I don't put the date. And I ask them, "Guess when this quote from the Senate was." And people say, "Oh, 2000," or, "Oh, 1980," and then I flash up 1936. And people go, "What? We've known this long that we've had this problem?" And no one's done anything about it.

Shawn Stevenson: Yeah. Until now. We've got to make a change.

Dr. Steven Gundry: Until now. Now, we're going to get the roots and soil back to normal.

Shawn Stevenson: That's right. I love it.

Dr. Steven Gundry: You and I will do it. Come on.

Shawn Stevenson: Just me and you, hand in hand. You know what? This... Again, this really gets into the conversation for me of, what does it look like when we have a robust healthy root system and soil internally, and we know what that looks like based on the data from folks who are eating closer to more of an indigenous diet, which you talk about as well.

Dr. Steven Gundry: Exactly. Yeah. This was one of the real eye-openers. I knew about this study long ago. The Hadzas in Tanzania are one of the last surviving hunter-gatherers that really stick to their traditional culture. And the men go off hunting every day. They walk 8-10 miles. The women gather berries and tubers. And they walk, on average, 3-4 miles a day, and they're very thin and very fit. So researchers said, "Gee, let's look at the energy expenditure of these people and compare 'em to the modern office worker. And I bet you we're going to find, because these guys are lean and fit and they're walking all over the place, that these guys are lean and fit 'cause they're burning through energy and they're just energy-consuming, whereas, the desk workers, they're sitting on their ass all day," and what they found just shocked them.

The energy expenditure of the Hadzas was exactly the same as a desk worker. And you go, "What? How can that be?" Well, in research, we have to make a conclusion, otherwise, we won't publish our paper. So these guys said, "Well, the reason for that is that everyone's got a set amount of energy expenditure and it's universal across the board." And I went, "What?" No. What's happening with these desk workers who clearly aren't producing energy by moving, they're using up

their energy with this fire of inflammation. And all their extra energy is being consumed in this fire. And it's just the most amazing thing that we had missed that obvious point. Energy was being produced and consumed, but it was being consumed rather than being used to do things, like walk eight miles.

Shawn Stevenson: Right. Man, the human body is just amazing and resilient. Now, what about the microbiome of these folks versus the average person in the Western world?

Dr. Steven Gundry: I am glad you asked. So these guys, we'll use them as an example, they vary their diet seasonally. During the summer, which is their dry season, they hunt and eat wild animals. During the wet season, they actually eat a lot of berries and actually consume a lot of honey. And their microbiome changes dramatically from season to season. And the number of species in their microbiome is very, very diverse. It's moving, it's organic. It's like a tropical rain forest, all these different species. You compare that to us, any Western diet, and we have a very non-diverse microbiome, we have very few species, and it never changes. And what we think is important is that those species do need to change on a circadian rhythm basis, on a seasonal basis, to actually tell our mitochondria how to produce energy. And this is probably one of the most startling discoveries in the book. And if I may talk about postbiotics.

Shawn Stevenson: Yes, please. Please do.

Dr. Steven Gundry: Okay. So everybody... Postbiotics? What the heck is a postbiotic? So everybody knows probiotics. These are the friendly bacteria. And you eat your yogurt to get your probiotics or you eat your sauerkraut to get your probiotics. Believe it or not folks, you don't get any probiotics from sauerkraut, but that's another story. Prebiotics are the fibers that friendly bacteria have to eat to, number one, stay alive, and number two, to produce chemical messengers that are called postbiotics that actually tell mitochondria, their sisters in all of our cells, whether to make a lot of energy or whether to throttle back on energy production. And the discovery of this communication system actually won the Nobel Prize for Medicine in 1998, but it's only recently been discovered that there is a language between the microbiome and us, our genes, our cells, that is primarily gases, like, for instance, fun fact, hydrogen gas. So everybody farts and everybody seems to be embarrassed by farting, but I actually tell readers to step on the gas, because the more gases that people make by eating prebiotics, the more you actually tell your mitochondria to produce more energy. Whoa.

Shawn Stevenson: Well, I literally highlighted this because you talked about how bodily gases are important for our mitochondrial function...

Dr. Steven Gundry: Yeah.

Shawn Stevenson: And neurotransmitter function and hormone signaling.

Dr. Steven Gundry: Yeah.

Shawn Stevenson: And you labelled these gasotransmitters.

Dr. Steven Gundry: Yeah, they're called gasotransmitters or gasomessengers, but it's actually now described as trans-kingdom communication. So the kingdom of bacteria and the kingdom of fungi actually talk to the animal kingdom and even the plant kingdom through gases. We knew that there was somehow an exchange of information, but we didn't know what it was. And literally, the discovery of these things is as important as the discovery of the Enigma code in World War II, where we broke the German language code of... In World War II, in what's called Enigma. And this discovery just opens up so many possibilities. Let me give you hydrogen as an example. So we know from work in Japan that people with Parkinson's disease and neurodegenerative disease don't have a microbiome that produces hydrogen gas. And people who don't have Parkinson's have a microbiome that produce hydrogen gas.

Shawn Stevenson: Wow.

Dr. Steven Gundry: So you give people with Parkinson's disease hydrogen water, which is hydrogen dissolved in water, they get better, as hydrogen... You can absorb hydrogen by drinking it, they get better by replacing hydrogen. Even something as rotten as hydrogen sulfide, the rotten egg smell, turns out to be incredibly beneficial for telling mitochondria to make energy, number one, and actually give them a substrate to make energy. And it's probably really good for your brain function as well. So who knew that in some cultures it's actually a sign of respect for the chef to break wind at the table?

Shawn Stevenson: I bet everybody didn't think we'd be talking about farting today. But it's so funny that this is one of those taboo things... Of course I'm thinking about the scene from Nutty Professor when the family's talking through farts...

Dr. Steven Gundry: Yeah.

Shawn Stevenson: At the table, but...

Dr. Steven Gundry: And Blazing Saddles.

Shawn Stevenson: Right. It's classic. So I think that there's going to be a conflict, this image of, what about gas and bloating? What about IBS, these things, versus the healthy performance of gases in our body which is actually essential?

Dr. Steven Gundry: Yeah, that's a great question. And I see large numbers of patients with IBS and complains of gas and bloating. And many of them have tried the FODMAP diet, for example, or the specific carbohydrate diet to eliminate this problem. And I assure my patients, number one, that if you want good mitochondrial health and if you want good energy production, these diets are the exact opposite of what you want for long-term good health, because you have absolutely starved the most important part of your body of the things they need to eat, the microbiome. But what we do is we stepwise re-introduce little bits of these prebiotics, and the whole book is a stepwise introduction of new habits. And this is one of them, a stepwise way. And once you do this, you begin to tolerate those gases, and you get a perfect balance between too little is really bad, too much is really bad, but we want to hit the Goldilocks rule of just right. And that's what we get people to do.

Shawn Stevenson: Perfect. I want to talk about what we can start to do to heal the gut terrain and what we can do to heal our energy crisis in our bodies, and we're going to do that right after this quick break. Sit tight, we'll be right back.

One of the biggest issues facing our world today is the health of our immune system. And our immune system has many different dynamic parts. We have an innate immune system, and we also have an adaptive immune system. Our adaptive immune system has an intelligence that helps us to adapt to any pathogen that we are faced with.

And our nutrition is a big part of this equation because our immune cells are made from the foods and nutrients that we consume. And one of the most powerful nutritive sources proven to help fortify our immune system is highlighted in this study, published in Mediators of Inflammation. They discovered that the polysaccharides in Reishi medicinal mushroom were found to



enhance the proliferation of T-cells and B-cells of our adaptive immune system. These were found to have the capacity to be immuno modulators, helping to up-level the function and intelligence of our immune system, or if our immune system is overactive to help to reduce and bring down that immune activity. Again, this is called immuno-modulation, and also inflammation of many different viruses that we might be exposed to, is one of the big issues. And one of the viruses that we're facing right now has a tropism or target towards inflammation of our lungs. In another study published in Patents on Inflammation And Drug Discovery revealed that the renowned medicinal mushroom, Reishi, has potent anti-inflammatory and anti-allergic action, plus again, it possesses immuno modulating capabilities.

Super remarkable, it's one of the things that's been utilized for centuries that we have access to today, but we want to make sure that it is dual-extracted, meaning that it's a hot water extract and alcohol extract, so we're getting all of these benefits that are noted in studies like these, and the place that I get my Reishi from, that does it the right way, organic high quality Reishi without any nefarious substances coming along from these random companies that are putting these formulas together is from Four Sigmatic, go to foursigmatic.com/model. That's F-O-U-R-S-I-G-M-A-T-I-C.com/model, and you're going to get 10 to 50% off all of the medicinal mushrooms that they carry.

And by the way, Reishi is great for your sleep as well, this is another peer-reviewed study published in Pharmacology Biochemistry and Behavior, found that the renowned medicinal mushroom Reishi was able to significantly decrease sleep latency, meaning you fall asleep faster and increase your overall sleep time and also increase your sleep efficiency. So much good stuff. And this is one of the things about real foods that have a storied history, is that they're not just good for one thing, they're good for many things. Alright, it's why I'm a big fan of Reishi and I have a cup many nights of the week before bed, about 30-45 minutes before bed.

Definitely helps with improving sleep quality, but also beneficial for our immune system, maybe have it with a little bit of whole natural source high quality fats like MCT oil, coconut oil, maybe a little bit of ghee whatever it is that you're into, it helps us to cut the bitterness, maybe a little bit, couple little drops of some Stevia, some English tapestries Stevia, chocolate Stevia just to make it nice and palatable or some folks have the Reishi tea all by itself. Either way, it's one of the most effective things right now when immune health is a top priority, check it



out, foursigmatic.com/model, and now back to the show.

Alright, we're back and we're talking with New York Times best-selling author, Dr. Steven Gundry, and before the break, we were alluding to how do we fix this issue, and you know what's so funny is that things that are good for one thing with the human body tend to be good for a lot of things.

Dr. Steven Gundry: True.

Shawn Stevenson: Because we're not actually isolated into parts, everything kind of works together, and one of the things that I thought was really fascinating that you brought up in the book is Vitamin D.

Dr. Steven Gundry: Yeah.

Shawn Stevenson: How does that play into this role of the energy equation, also our microbiome?

Dr. Steven Gundry: So one of the fascinating things through the years, so I measure Vitamin D levels on all my patients, and I learned very early that all of my patients with fatigue and also autoimmune disease had very low levels of Vitamin D, even though they were... Most of them were taking Vitamin D, and I began aggressively replacing Vitamin D with them, sometimes very high amounts. But I would measure this, and I'd get their Vitamin D levels up to at least 100 nanograms per milliliter. Now, some people think that's toxic, I can guarantee you, I've never seen Vitamin D toxicity. But, as we did this, I began to notice that with the other things we were doing, their autoimmune disease markers went down or went away, and that their energy levels started going up, and so I began to really research how Vitamin D is doing this, and so back to the lining of our gut, we have these roots, and these roots have these individual cells that are damaged when you get leaky gut, and there's a set of cells called stem cells that replace the damaged cells, and they're really good at this, and it happens all the time, except you have to have Vitamin D to push these stem cells awake to close the gaps. Number two, we've learned more and more and more that Vitamin D manipulates the immune system, which the immune system actually is the cause of inflammation, and Vitamin D tells the immune system to, "Hey, don't get so crazy, don't get so wild. Calm down, relax. Everything is fine here."

And in people with autoimmune disease, the immune system is haywire and the immune system doesn't listen to vitamin D very well. So the more we can get

Vitamin D into people's bodies and sunlight is a great way to start, but quite frankly, we don't get enough sunlight anymore, but if we can take Vitamin D, Vitamin D3, I think everyone should have a minimum of 5000 international units or 125 micrograms.

Let me give you a great story of what happened yesterday. I saw a lady in her 40s who has severe candidiasis. And I talk about candida in the book. And it's very rare that I see someone who really suffers from candidiasis, but this woman had such bad candidiasis that her tongue was coated with thrush, and she was taking heavy, big time antibiotics, anti-fungals to kill this off, and nothing was working. And her well-meaning doctors told her well, she had an immune deficiency disease, and she was getting IVIG injections every week, and she was miserable, wasting away. So she had come and saw my physician assistant, Mitsu, three months ago, and Mitsu... She had a very low vitamin D, and her vitamin D was 23. A bare minimum is 30. In my opinion, bare minimum is 80. So Mitsu said, "Well wow. We're going to put you on 10,000 international units."

And so I saw this woman for the first time yesterday, and she said, "You're not going to believe this, but within a week of taking the vitamin D my thrush went away for the first time in 10 years." And she said, "That's really weird. I mean, the antifungals weren't touching it, the antibiotics weren't touching it." And she said, "I'm starting to actually gain weight and feel normal." And we measured her vitamin D this time around and it was up to 50, which is double what she was, and I said, "Well, this is great. We're going to 20,000 international units, and I guarantee you that things are going to get even better." But just vitamin D gave her the ability to ward off, or change this fungus's ability to attach to her, just vitamin D.

Shawn Stevenson: That's absolutely remarkable. And again, this is moving away from the standard of care with that was not working, and it was one of these very simple principles like... And let's be clear on the type of vitamin D. So it's not D2 though, right?

Dr. Steven Gundry: No, not D2. D2 is quite frankly worthless and maybe actually hazardous, so it's vitamin D3.

Shawn Stevenson: Got it.

Dr. Steven Gundry: Doctors used to prescribe vitamin D2, and it was a prescription drug, and you'd take 50,000 units every week, or twice a week, and it was useless, but we had a



prescription for vitamin D2, and any doctor knows that prescriptions are the way to go, not.

Shawn Stevenson: This is so good. So good. And this just reminds me too, you do talk about this as well, the importance of sunlight and vitamin D3. In a perfect scenario, we'd be getting access to a bit more sun than we do today. It's probably... Not probably. It's a major epidemic, for sure, with folks not getting outside, not getting exposure to sunlight, intelligently, and also you talk about within the context, eating your sunscreen.

Dr. Steven Gundry: Yeah.

Shawn Stevenson: Right. Can you talk a little bit about that?

Dr. Steven Gundry: Yeah, I haven't used sunscreen for over 20 years now, and one of the things that people remark about, because I'm now in my seventh decade, they go, "Let me see your skin. And your skin is like a young person's skin." So we have the ability to eat protection from the sun, and for instance, time-released vitamin C is one of the best protectors of UV light there is, and vitamin C is essential for repairing collagen breaks that UV light causes, but equally as important is we can actually produce more melanin, which absorbs sunlight... And by the way, speaking of similarity to plants, we actually produce ATP from our melanin pigment when it's exposed to sunlight, exactly like a plant produces ATP when exposed to sunlight. And there's a lot of plant about us. There's a little bit of plant in all of us. So not only will you get more energy by exposing yourself to the sun just by using the photons from sunlight to make ATP, but you're going to get a huge brain boost, particularly from early morning and late afternoon sun. These orange and red colors do phenomenal things to make your brain work properly, and that's why any time we get a chance, early morning light, late afternoon light is just one of the best mood boosters there is.

Shawn Stevenson: I love this so much, and just bringing up another simple principle of the colors of foods being an indicator of nutrition, of antioxidants. These are all very basic tenets that we should know about.

Dr. Steven Gundry: Yeah, eat the rainbow and they'll protect you from the damaging parts of sunlight.

Shawn Stevenson: You're not talking about like Lucky Charms Rainbow?

Dr. Steven Gundry: No, not that rainbow. That's one of the things that's really been detrimental to our energy production, and that is... I'm glad you brought that up. Kellogg's Corn Flakes was the first advertised pre-digested meal, and that was their selling point, that you could get more energy, because all the components of corn in this case were pre-digested, so it took away all the work of digestion and it would instantly become energy. This was actually in the early 1900s. That was the advertising pitch. What's happened with all of our processed and ultra-processed food is exactly that. Everything is now pre-digested. We have sugars that instantly hit our bloodstream. We have proteins that have been broken down into individual amino acids that instantly hit our bloodstream. We have fats that instantly hit our bloodstream.

And what happens as we talk about the energy paradox is all three of these components, which your mitochondria can use to produce energy one at a time, rush hour now hits your mitochondria with all of these substances simultaneously and you literally get energy gridlock. And that explains when, okay, you eat a fast food meal for lunch and by 2 o'clock you are dragging, and your brain doesn't work, and you go, "Woah." No, it wasn't the inflammatory food you eat, it wasn't that fast, it was clogging your energy highway with these foods that had no business entering into your circulation just like wham. So Kellogg's Corn Flakes started all this.

Shawn Stevenson: You don't know this, but we did an episode, the history of cereal, and I went back and started the episode and talked about the history with Kellogg's Corn Flakes, and Dr. Kellogg was a big proponent of managing your sexual desires well suppression, and this was part of the formula as well, to make you not want to mess with your wang, basically.

Dr. Steven Gundry: Jerk off. Yeah. 'Cause I was a professor at Loma Linda University Medical School for many years for much of my career, which is an Adventist institution. So I got to read all the history and Battle Creek Sanitarium was an Adventist hospital.

Shawn Stevenson: Wow. I went back and I actually read some of those old fangled texts too and he had all of these symptoms for knowing if your child is masturbating. It was like poor skin, poor posture, hard of hearing. It was just like all of... It's basically everything.

Dr. Steven Gundry: Everything yeah.



Shawn Stevenson: Was a indication that your child is masturbating and you need to get them on some corn flakes. Shout-out to corn flakes I guess. Still out there doing his thing.

Dr. Steven Gundry: And quite frankly, since we're on the subject, I have never met a man who couldn't have a normal testosterone level, if I got rid of his simple sugars and processed foods. It is one of the best ways to suppress your testosterone that anyone has ever invented. So guys, if your get up and go has got up and gone, if you know what I mean, change your food and watch what happens.

Shawn Stevenson: On that note, we're going to extend into the next topic. This really brings up for me another one of the things that siphons our energy that we've touched on multiple times but I think we need to really drive this point home which is how much energy is required for our immune system to function. Because right now obviously our immune health is of the utmost importance and top of people's minds. So can we talk about number one, the energy requirement for the immune system and also can we talk about some things that we can do right now to improve our immune health?

Dr. Steven Gundry: Yeah, we all have heard now ad infinitum about people with pre-existing conditions are much more susceptible to COVID-19, and if they get COVID-19, they're not going to do well. Well, it turns out that all pre-existing conditions are... Underlying leaky gut is the cause of all of these pre-existing conditions, whether it's diabetes, whether it's heart disease, whether it's auto-immune diseases, whether it's hypertension, whether it's cancer, all of this relates back to the gut and to the inflammation that's going on. So your immune system, 80% of your immune system lines your gut down in your belly, because that's where stuff is going to come across your border that needs your immune system's attention. And the immune system is an energy hog and if the immune system needs more energy to fight the invaders that's coming across your gut wall, it's going to take all that energy. And so your viewers and listeners, the example is the flu virus.

If you get the flu, the flu virus is just a protein, and it has no ability to make you ache, make you feel lousy, but your immune system, when it sees this protein goes, "Oh, this is a bad actor and we need to rev up our troops, we need to fortify the troops, we need all the fuel for the troops, and how are we going to do that?" Well, the main consumers, normally, of energy are muscles and your brain. So what do you do? You make muscles hurt, make hurt to move and you make your brain not want to function. All you want to do is sleep or just binge-watch



something and certainly not do high mental processing. You get brain fog. Your immune system, your own body is doing that to you, so that your immune system will have all the energy it needs. One of the sad things is when we have most of our immune system distracted with this chronic inflammation, then it doesn't have the ability to take care of the things it really should have been taking care of.

I see tons of people that absolutely get their immune system distracted because of leaky gut, and they're a set up. I have two older patients. The wives were my patients, the husbands weren't. The wives followed my program, the husbands didn't. Both sets of families got COVID, both wives it was a 48-hour illness, they said, "Meh" but like a cold, nothing. Both husbands wound up in the ICU. One spent 56 days in the ICU intubated, spent six months in the hospital. The other husband passed away and it's all because, for instance, both of these women had a vitamin D level of 100 and they've been following my program, they didn't have leaky gut. And I've written editorials about this, we have the ability, and we've talked about this, to protect ourselves, to arm ourselves against whatever is coming after us. And we have the ability to do that if we'll just take a few simple steps.

Shawn Stevenson: This is so remarkable. I think that this leans into one of the things you touched on when we talked last time in addressing this energy crisis but also, improving our immune health and this is this term that we can really dive in deeper on which is fasting.

Dr. Steven Gundry: Yeah. So the program in the book... I have an energy equation that I have to give a nod to Einstein. So, it's $e=m^2c^2$, and so energy stands for energy, m^2 is microbiome in mitochondria, and we've kind of touched on that. The c^2 is what I call chrono consumption, and that is simplistically limiting the amount of time that you consume food during the day. And then obviously, these types of foods that you consume are important with that. Now, everybody's heard of fasting or intermittent fasting or water fasting. I was actually... As far as I know, the first author to write about intermittent fasting in 2006, long before it got de rigueur. But the important point is when people, particularly in a western diet, try to intermittent fast, try to extend the length of time that they go without meals, about 80% of people fall flat on their face. They get headaches, they lose energy, and that's because we don't have what's called metabolic flexibility or mitochondrial flexibility. We can't change fuel sources easily, and I go really into depth in why that is, but in my program, what we do is we step-wise, slowly have people transition to an intermittent fasting diet. And it's actually very simple.

Each week, in a six-week program, we have people... Let's say on Monday, you eat breakfast at 7 o'clock, well, we're going to ask you to break fast at 8 o'clock instead of 7 o'clock, and then yeah...

Shawn Stevenson: Seems easy enough.

Dr. Steven Gundry: Anybody can do that, right? And then on Tuesday, we're going to ask you to break fast at 9 o'clock and so on. Now, we get to Friday, we get to take the weekend off. You don't have to suffer during the weekend if you consider it suffering. Then the next week, we start one hour later and we start the process again. So, we'll start at 9 o'clock the next week. And if people... If 10 o'clock is as far as they can make it, that's fine, we hold there and we try again next week. So what we found in my program, is we can slowly but surely reintroduce this time restricted eating. And quite frankly, the... Probably the best time restricted eating is around six hours, so what that looks like, is noon to 6 o'clock eating your calories. But getting back to the immune system, studies in rats and mice and humans show that the more we can reduce your window of eating, the more you're going to have a better microbiome, the more you're going to have an intact gut wall and paradoxically, the more energy you're going to produce. Because quite frankly, you take away this rush hour, traffic jam on your mitochondria and things are able to move smoothly. What a paradox.

Shawn Stevenson: Right. That was so good.

Dr. Steven Gundry: And you don't have to cut back on calories.

Shawn Stevenson: That's the funny part, isn't it?

Dr. Steven Gundry: Yeah, yeah. You can... And there's beautiful studies with Italian athletes showing that if you had these athletes eat during a six-hour window compared to athletes who ate in a 12-hour window, the same calories, the same food. That the group who ate in the six-hour window lost weight, had more muscle mass than the group that ate for 12 hours. It's like, Holy cow, what a win-win. So, same calories... So, so much with the calories in, calories out theory.

Shawn Stevenson: Yeah. Man, this is so good. And this... You just mentioned, and I didn't know if you would bring that up, one of the most remarkable things about intermittent fasting versus traditional or conventional caloric restriction, is the maintenance of your muscle mass. It's some really remarkable thing your body does, which that



supports that long-term fat loss. That long-term energy is carrying and protecting your valuable muscle tissue.

Dr. Steven Gundry: Yeah, it's fascinating. And then, I got one more trick. Can I mention?

Shawn Stevenson: Please do, yes.

Dr. Steven Gundry: So I've mused in all my books about the paradox of what I call mono diets. And that is eating primarily carbohydrates. There's a Duke Rice Diet where basically all you eat is rice. And then, there is a typical high protein diet like the original Atkins diet or the carnivore diet. And then there's the ketogenic diet, where it's 80% fat. And interestingly... So I call these mono diets, you're choosing one macronutrient, and as long as you do that it turns out the mitochondria pretty doggone happy 'cause there's only one set of vehicles on the highway at any one time, there's no trucks, buses and cars. Just cars or just buses. And they're called... And they all work, they really do. Get over it folks, call me out on Twitter, but they all work.

Why do they all work? Because it's choosing one fuel and one fuel only. So, what I do, the first meal of the day, the break fast, which is where the word came from, is a mono meal. So, whether you want to have... Give you an example, millet cereal, puffed millet cereal with low-fat almond milk or whether you want to have a shrimp cake, or whether you want to have naturally raised Canadian bacon, just as an example, and you want to change up every day, what kind of crazy diet is that that you get to have carbs one day, and high protein the next day, and high fat the next day? And change it up. It turns out that your mitochondria for that first meal of the day, love the fact that you're only giving them one thing to work with. And it really turbo-charges your energy production.

Shawn Stevenson: That's fascinating. And again, so simple.

Dr. Steven Gundry: Yeah, so simple.

Shawn Stevenson: So simple.

Dr. Steven Gundry: And eliminates boredom. I mean, the reason most mono diets fail, the reason 80% of keto diets fail, the reason 80% of Atkins diets fail is because of boredom. You run out of interesting things to eat.



Shawn Stevenson: And we don't like that.

Dr. Steven Gundry: No.

Shawn Stevenson: We just don't like to be bored.

Dr. Steven Gundry: No.

Shawn Stevenson: Well, of course, there's so many things I want to ask you about, but I do want to touch on one more topic, because this is just so overlooked in the energy equation. Can you talk about how stress can create abnormal changes in our microbiome and affect our energy?

Dr. Steven Gundry: Yeah, great question. We've got a two-way communication system between our brain and our second brain, which is our gut and its neurons and the microbiome. In fact, the more we've learned about the microbiome, the more we realize that the gut brain axis actually needs to be renamed the microbiome gut brain axis. And stress actually works two ways. Stress actually creates leaky gut in and of itself, and I can't tell you the number of people, particularly women, with an autoimmune disease can point to the day their problem started, either the death of a mother or a divorce or a sudden job loss like so many of us have had during COVID-19, that actually caused leaky gut, and we actually divert with stress all of our blood flow away from our gut, and you just have to look at the examples of some of these marathon runners who at mile 23, suddenly stop and have bloody diarrhea right in the middle of the race course. And that's because they've diverted all the blood flow away from their gut, and their gut literally becomes ischemic and it falls apart. And stress will do that.

But what's even more interesting is that stress actually communicates to the microbiome and changes even good bacteria to leave and bad bacteria to take over, and the more stress you have, the more bad bacteria produce stress hormones that go back up to your brain and reinforce things. So the long and short of it is the more we give our gut microbiome good things to eat in terms of prebiotics, but more importantly, the more we develop de-stressors, whether it's meditation, whether it's yoga, whether it's just a simple communication system between friends, which has been lost, mightily, or what I love to do is have what are called energy snacks. Now, most people think of energy snacks as oh, I'm going to have an energy bar. What I want people to do is have an exercise snack, and tiny bits of exercise, whether it's walking up and down stairs here in your

house for a minute, has amazing de-stressing properties, and as a bonus, it actually makes you not hungry. And so if people will do 10 minutes of energy exercise snacks during the day, they don't have to go out and beat themselves up during exercise. You will... Any amount of exercise will begin to repair your gut wall and de-stress you simultaneously.

Shawn Stevenson: I love this. It's such a great reframing, energy snack. So good, so good. And this is just something that's not brought into the conversation when we're talking about healing your gut. We have to address the stress in our lives, and we are at a time right now where it's not the same kind of stress that our ancestors dealt with about shelter and safety, we're pretty... For the most part, even me, I grew up really living in poverty, what's considered poverty here in the United States, which is still like we got a couple TVs, we got a rust bucket of a car still. My mom actually would buy cars from a place called O-K Junk Cars.

Dr. Steven Gundry: All right.

Shawn Stevenson: I swear to God. I swear. And she just kept on... One gets kicked to the curb and she's, Go back and get another one from O-K Junk Cars. But even in that context, we're not talking about dealing with the stress that we're inundated with today, because even though our needs are met in a sense, we create this chronic low level habitual stress. It's just kind of like this fire that's adding to that raging fire that's absorbing our energy and nobody's talking about that. We need to manage stress better versus taking a damn energy drink. So I love this book so much.

Dr. Steven Gundry: Thanks, I appreciate it.

Shawn Stevenson: So you're doing something really special, and we talked about this before the show and how you had to fight for this, what you're about to share, and I want everybody to take advantage of it because it's just so cool and so powerful. So when folks, right now, you can pre-order The Energy Paradox, and you got to do it right now. Pre-order the book. They're going to get something exceptionally special that I haven't seen anybody do before.

Dr. Steven Gundry: So if you pre-order the book and you can go to barnesandnoble.com, amazon.com, and if you send us an email that you pre-ordered the book, we'll send you free of charge with shipping and handling, a hard cover copy of the one that started it all, The Plant Paradox, and they're quite frankly, wonderful companion pieces because this book doesn't speak a lot about lectins that started



it all, certainly does, but they fit hand and glove. So this is my gift to your listeners. So I hope they'll take advantage of this 'cause it's a wonderful gift, and I actually did have to fight for this, but I want people to get this book and get the other book too.

Shawn Stevenson: Awesome and everybody just pre-order the book right now from your chosen retailer, and then you're going to email, I'm going to give you the email, freebie@gundry.com. Alright so that's F-R-E-E-B-I-E@gundry.com, and just use the headline Energy Paradox. Just use the headline Energy Paradox and let them know just... You could even use a screenshot, your proof of purchase from pre-ordering the book. And again, free shipping everything, they're going to mail you a hard cover copy of the book that started it all, New York Times best-selling book.

Dr. Steven Gundry: And by the way, go to your local bookstore and pre-order it please, and just send us a screenshot of the receipt. That's all you got to do.

Shawn Stevenson: Perfect. Dr. Gundry, again, I appreciate you so much. I know that you are... You're a testament to the fact that we are inundated in our culture, again, with the idea that having low energy is to be expected as the years roll on. But you are a living example. I've said this for years, even when you're not here, I'll bring you up and just use you as a testament to what's possible, you're seeing patients sometimes seven days a week, you have a relationship with your wife, you're writing books, you're churning out books like... It's amazing.

Dr. Steven Gundry: Somebody stop me. No, don't. And this is what I tell actually to all my patients. Please, please, please, never retire. If you want to start a downward spiral and a downward spiral in energy, just retire and watch how bad things happen.

Shawn Stevenson: So I'm again, pumped to see what you do next. The Energy Paradox is another game changer, and I appreciate you so much for hanging out with us.

Dr. Steven Gundry: Well thanks so much. I really appreciate all your help.

Shawn Stevenson: Awesome, Dr. Steven Gundry everybody. Everybody, thank you so much for tuning in to the show today. I hope you got a lot of value out of this. Such an important insight because life is energy. It's really the driving force of our human experience. When we cease to be around that energy no longer exists. We're an energy being, and I don't think enough attention is given to the things that actually siphon our energy because we have this immense potential just by the



very nature of you being alive and being human right now, you are teaming with energy. There's so much energy about you, however, today in our "modern life style," so many things are contributing to our energy just getting burned up haphazardly as Dr. Gundry has revealed today. So, so many powerful insights and guys really take advantage. Pre-order the book right now, and then email freebie@gundry.com with your proof of purchase for The Energy Paradox, and they're going to send you a hard cover copy of The Plant Paradox for free.

And they're paying for the shipping. Just incredible. I love people like this. They go above and beyond. And this is another important part of the conversation to really help to shift the health and wellness of our communities and really our world at large at a time we really, really need it. I appreciate you so much for tuning in to the show today. If you got a lot of value out of this, please share it out with your friends and family on social media. Of course you can tag me, I'm @shawnmodel on Instagram and tag Dr. Gundry as well. He's @drstevengundry. All right, we've got some epic shows coming your way very, very soon, so make sure to stay tuned. Take care. Have an amazing day, and I'll talk with you soon.

And for more after the show make sure to head over to themodelhealthshow.com. That's where you can find all of the show notes, you could find transcriptions, videos for each episode, and if you got a comment, you can leave me a comment there as well. And please make sure to head over to iTunes and leave us a rating to let everybody know that the show is awesome, and I appreciate that so much. And take care. I promise to keep giving you more powerful, empowering, great content to help you transform your life. Thanks for tuning in.