

# **THE MODEL HEALTH SHOW**

**EPISODE 661**

## **Eat These Foods To Extend Your Lifespan & Stay Young Forever**

**With Guest Dr. Mark Hyman**

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**SHAWN STEVENSON:** Welcome to the Model Health Show, this is fitness nutrition experts Sean Stevenson, and I'm so grateful for you tuning with me today. There are radical innovations happening right now in the field of longevity, there are new discoveries that are enabling human beings to extend their lifespan, not just by a couple of years, but potentially by decades. Today, the longest lived fully documented human in history, she lived to be 122 years old. It was Madame Jeanne Calment, a French woman who just happened to be a chocoholic and here's the thing, what you're going to discover today, it's not just about the nutrient inputs because she would've been doing some of the things that would not be attributed to longevity according to conventional understandings. If you look at these Blue Zones across the globe, these are places where they have the highest number of centenarians in their population, so these are folks who are living to be over a hundred years old.

The diets are very diverse as far as their nutrient intake, their percentages of animal foods versus plant foods and micronutrient varieties. However, there are some key principles that are consistent, but beyond the diet, beyond the plate, there are also other lifestyle factors that are ushering in this new wave of health and wellness that we all can take part in. Now, here's the thing, are these innovations truly new or is it ancient old wisdom that science today is now demonstrating and affirming to be true? That's what we're going to be discussing today with one of the foremost experts in health and medicine and wellness, but also somebody who is a living representation of what he's talking about, because now as he's into his mid 60s, if you only knew the adventures that he is participating in, right?

Actually, he was leaving here to head to a yoga class while he's on the road. And tomorrow I think he's like flying to Mexico for an adventure and just he's doing all of these incredible things and doing it with such vitality. Not to say if you knew his story, that he hasn't been through tremendous health challenges himself, and we've talked about that on past episodes with our special guests. But today, he's going to be sharing his insights in a way that only he can and packaged up to really help us to understand the science of longevity and what we can start utilizing today to activate this in our own lives. Because simultaneously, while we have all of these wonderful innovations in longevity, including extending not just our lifespan chronologically, but our health span as well, and our biological function and performance, while at the same time we're also experiencing a shocking drop in life expectancy here in America that's been on the decline since 2015.

We now have the first generation in recorded history here in the United States where our life expectancy has gone backwards for decades and decades and decades. Life expectancy continue to increase, but now that trend has reversed. There's something that has arrived with

all that we know, with all that we have access to. Why are we more chronically diseased than ever? And also, why has our life expectancy suddenly reversed? So again, there's two paradigms that are taking place at the exact same time, and you get to choose which one you are going to participate in. So that's why this is so exciting, and I can't wait to share this incredible conversation with you. Now during this conversation, one of the many facets or ingredients that he talks about in regard to accelerated aging and also reversing aging has to do with inflammation. And you're going to hear about why.

But one of the things as far as our nutrient intake, one of the most studied beverages in science, has actually been found to protect our bodies against age related inflammation. Researchers at Stanford University recently deduced that the caffeine in coffee is able to defend against age-related inflammation. Their research revealed that light to moderate coffee drinkers live longer and more healthfully, thanks in part to the protection caffeine provides by suppressing genes related to inflammation. Another study, this was published in the journal, Practical Neurology Details, how regularly drinking coffee has been shown to help prevent cognitive decline and reduce the risk of developing Alzheimer's and Parkinson's disease. This is shocking, to say the least, well, in some aspects it is, but in others, it shouldn't be. Many long-lived cultures regularly consume coffee, but there's a bell-shaped curve of benefits and also, if you look at the populations that are living long and healthily while consuming coffee, they're having high quality coffee.

It's not riddled with pesticides and toxic molds and these nefarious things that increase inflammation. So, the quality of coffee matters, number one but what if we take it a step further? What if we infuse that coffee with other incredible sources of nutrition that are also protective and help to support longevity? The organic coffee that I had today was also infused with Lion's Mane medicinal mushrooms and research at the University of Malaya found that Lions Mane has been found to actually help to protect the brain against degradation. Specifically, they're studying it for helping to reverse even traumatic brain injuries because of its ability to be neuroprotective and stimulate neurogenesis. I get my coffee exclusively from Four Sigmatic. Go to [foursigmatic.com/model](http://foursigmatic.com/model). You get 10% off their incredible medicinal mushroom infused coffees also, they have elixirs, which are more like teas, so you can utilize these incredible medicinal mushrooms. They even have mushroom infused hot cocoas that my youngest son Braden, for example, that's one of his favorite things to drink in the morning. Alright, so we're talking about Nutrigenomics, in its freshly brewed truest sense and you also get 10% off when you go to [foursigmatic.com/model](http://foursigmatic.com/model). That's F-O-U-R-S-I-G-M-A-T-I-C.com/model.

Get 10% off all of their incredible mushroom infused coffees, elixirs, hot cocoas, and so much more. They even have an incredible protein powder as well, all highest standards organic and made the right way. By the way, their medicinal mushrooms are dual extracted, so you're

actually getting the nutrients that these studies are affirming. If you don't have a dual extraction, then you're going to be missing out on a whole array of nutrients that can only be extracted by an alcohol extract, say, or vice versa, a hot water extract. So, you want all of the goodies, the Beta-glucan components, the triterpenes, the wonderful polysaccharides, all of the phytonutrients that we're really looking for, Four Sigmatic does it the right way. Again, go to [foursigmatic.com/model](https://foursigmatic.com/model) and now let's get to the Apple Podcast review of the week.

**ITUNES REVIEW:** Another five-star review titled “Model Health, more like Model Life” by Alice W. “Hi there, I've been on my fitness journey for the past 7 years, battling with weight gain and weight loss, but most of all letting other people dictate how I felt and what I did. I was in a domestic abuse situation from 2018 to 2021, and I finally found my way back to your show in 2022, after seven years from last listening, let's just say I am obsessed. I listen to your show everywhere, I operate, a dog walking and sitting company, and I listen to you on my walks. I'm super grateful for your podcast as it's helped me overcome so much, in the last two years. I've become the person I've always wanted to be, and I'm happy and working on losing the weight I've gained. I am 30 pounds down as of today, and I plan to keep going, I sleep eight hours a night, thanks to you. I use Insight Timer for meditation and breathing, I loved your episode where you said that weight is lost when you breathe, this couldn't be more true, this episode was 204 or 205, which is where I'm at on your show. I'm going to keep listening just as long as you do, thanks so much.”

**SHAWN STEVENSON:** Wow, man thank you so much for sharing your voice and your experience and your story and your heart that really, that means so much. Thank you, you are absolutely amazing, and you are on that adventure that I'm so honored to say this and to see thousands of new people every week are starting at episode number one of the Model Health Show and going through each and every episode. And so, if you're hearing this episode right now and you're on that journey, thank you so much for making me a part of your life and traveling with me, and it means so much. And I promise you there's so much more in store for you, your best days are still to come. Now, on that note, let's get to our special guest and topic of the day. Our guest today is Dr. Mark Hyman. He's a family physician and internationally recognized leader, speaker, educator, and advocate in the field of functional medicine, he's the founder and director of the Ultra Wellness Center, senior advisor for the Cleveland Clinic Center for Functional Medicine, and 14-time New York Times bestselling author.

He's also the board president for Clinical Affairs for the Institute for Functional Medicine, and he's the host of one of the leading health podcasts, The Doctor's Farmacy. He's been a regular medical contributor to several television shows and networks, including CBS This Morning, Today, Good Morning America, The View, and so many other major media outlets, and now he's back here on The Model Health Show, and I'm telling you right now, this information is so important because we have the opportunity to choose which track we are going to take, one

towards health and longevity and performance, or one towards disease and degradation because both are happening simultaneously and you have the power to choose. It starts with education and empowerment, let's jump into this conversation with the amazing Dr. Mark Hyman. It's not often that we have a true icon and pioneer in health, and that's who we have here in the studio today, Mark Hyman how are you man?

**DR. MARK HYMAN:** You're too nice, Shawn, you're too nice. I'm good, I'm great doing good.

**SHAWN STEVENSON:** Yeah, it's good to see you.

**DR. MARK HYMAN:** Good to see you too.

**SHAWN STEVENSON:** Let's start off by talking about Sardinia and the secrets you discovered there about living a longer, healthier life on your recent adventures.

**DR. MARK HYMAN:** Yeah, you know, Shawn, I'm getting older. I'm chronologically 63, and as I get older, I'm much more interested in the science of longevity.

**SHAWN STEVENSON:** Yes.

**DR. MARK HYMAN:** I've always been interested in the science of health, which really underlies the science of longevity. And in my quest to really understand the secrets of longevity, I went to some of the places in the world where people live the longest, they're called the Blue Zones. And Dan Buettner, a colleague and friend of mine really popularized these Blue Zones by writing about them. And there's five of them, he's identified, and there's for sure more in the world that haven't been, but Sardinia, Ikaria in Greece, Nicoya Peninsula in Costa Rica, Loma Linda, California, with the Seventh Day Adventist and the people in Okinawa in Japan. And I went to Sardinia and Ikaria, and Sardinia was just an amazing place because they were kind of landlocked in the very mountainous regions, so they hadn't never been conquered, and they had their own language, they had their own habits, they had this ancient Nuragic civilization, so they really had this really ancient way of life that was very well preserved. And the defaults in their world made them healthy, they didn't go to the gym, they didn't go to Whole Foods, they weren't like meditating.

They were all the things they were living a life that by default was activating all their longevity pathways. So, they ate a diet of foods that were local and that were fed by nature, you know, wild herbs and wild plants and goats and sheep milk and cheese they were eating these wild plants that were full of phytochemicals that they were getting. They were having to climb mountains just to shepherd their goats and sheep over these mountains, five miles a day up rocky terrain every day. They were making everything by hand, they had deep sense of

community and connection, and they had a deep sense of purpose. They were never alone, there were no nursing homes, you know, even if there was one woman I met Julia, who was 103 months, she said, like, I'm five and three quarters, you know. And she was like, "I'm 103 months." And she was like, I never got married, but she was living with her nieces and nephews, and they were taking care of her, and she was still working and producing all these beautiful doilies for weddings and all these lace things that I don't even know what they call them, but they had this sort of natural sense of community and celebration of life.

This one guy, Carmine, we were driving out of this town on the side of this mountain, and this town had basically been built in the 1950s, after the original town had been subject to a huge mudslide, and so everybody evacuated this whole town. And this guy, Carmine, was sitting on this stone wall, he parked his car in front of us, kind of blocked us, and he came out and sat on the stone wall, and he just kind of waved to us to come over. Like, I mean, "Who does that in America?" Like just stops your car and comes, come have a chat. So, he sat and had a chat for hours, and then he was telling us about how he grew up in this little village that had been sort of abandoned, and he took us down there where his old farm was, and he was still farming, he was 85 years old. He had a pig and he had six sheep, and he had orchards and olive trees and fig trees, and he had chickens and like huge amounts of gardens, and he took care of all of it himself, and he gave most of the food away, he fed his family with it.

And I mean, I couldn't keep up with him, he was running up the mountains, and so I got to see a way of life that we can learn a lot from, obviously none of us are going to go back to living that way, but the principles and lessons from that way of life were really striking. And I think it was a combination of sort of this natural movement that sort of foods that were so close to the earth and in their original forms, it was this powerful sense of connection to community and meaning and purpose, and it was a sense of joy and life that they had.

**SHAWN STEVENSON:** You really emphasized this in the book also the importance for having a reason for being. You said specifically "The science is clear, those who have more meaning and purpose in their lives live longer regardless of their lifestyle."

**DR. MARK HYMAN:** It's really true. I was sort of shocked by the data. Even though I'm going to exercise and add many years to my life, and that's true. But the studies have shown that if you look at people's meaning and purpose, they, people who have more meaning and purpose, live seven years longer. And that has nothing to do with what you're eating or what you're doing with your body in terms of exercise, but it has to do with a sense of belonging and in connection.

**SHAWN STEVENSON:** Yeah. We think that these people are outliers who like smoke cigarettes every day or they're chocoholics, as you mentioned, in the book, one of our great stories of

people having longevity. But there's this underlying thread of having a sense of purpose and meaning. And what I wanted to talk to you about and what I'm so fascinated by, because we know about these Blue Zones, and we know that the diet is actually different in each one of these Blue Zones because of the accessibility of certain foods in different places.

**DR. MARK HYMAN:** Sure, yeah.

**SHAWN STEVENSON:** And so, what is the thing that ties everything together? What is the consistent thing underlying all of it is that sense of community and a sense of purpose.

**DR. MARK HYMAN:** Yeah, although it's true but although the diet is really very similar in its framework. In other words, it's very rich in plant foods. So really rich in phytochemicals, which we now know are keys to longevity, these compounds in plants, there's 25,000 or more of them that activate longevity switches, they're often high in really good fats, they're high in omega-3 fats, they're rich in foods that often are wild. Like in Ikaria they had a lot of wild sage tea, which is full of these catechins that activate longevity pathways that we find in green tea, they're eating goat and sheep milk again, that's eating these wild plants. This one guy, Olinto, said to me in Sardinia, he says, "We flavor the pig before we kill the animal." I'm like, "What do you mean?" He said, "Well, we feed it carobs and acorns and this and that." They know that the medicine in the food is making the food taste better. They don't think, "Oh, I'm feeding the food phytochemicals to make it medicinal and make me live a long time," they just know it tastes better.

**SHAWN STEVENSON:** Right.

**DR. MARK HYMAN:** You know, and flavor always follows the medicine in the food. And they eat foods that are wild, and for example, in Ikaria, they eat a lot of wild mushrooms and wild greens. They have summer greens in winter, you can go to a restaurant there and order wild greens. I've never seen that now wild greens on a menu in America, you know? It's pretty amazing.

**SHAWN STEVENSON:** Yeah, that's so fascinating it is that it's baked into the culture.

**DR. MARK HYMAN:** Yeah, totally.

**SHAWN STEVENSON:** That's what's so cool about it. And in the book, of course, the antithesis of living in this lifestyle, we have certain hallmarks of aging, that we might not be aware that they're happening or that we're engaged in, can we talk a little bit about that?

**DR. MARK HYMAN:** Yeah, so what's really fascinating is that most of medicine's been focused on the science of disease, describing diseases, naming diseases, discovering drugs to treat disease. The what? Very little of medicine is focused on the science of health, when I went to medical school, I read a book called "The Pathologic Basis of Disease". I didn't read a book on the scientific basis of wellness. I was like and if you go to your doctor, say, "Doctor, I don't feel symptoms, but I want to be optimally well, I want to supercharge my health, I want to live to 100." They're like, "Okay, well, eat better and exercise more." And how's that going to help you?

**SHAWN STEVENSON:** "Thanks, doc."

**DR. MARK HYMAN:** "Yeah, thanks for the advice." And so, it's not their fault, it's just that we haven't come upon the science of health and functional medicine is the lens through which I look, which is really a system's view of health. It's an ecosystem view, and in the science of the longevity, researchers are discovering that almost all the diseases of aging, that we see as and think of as normal like heart disease, diabetes, cancer, dementia, they're not normal consequences of aging. They're consequences of abnormal aging and so the science is really quite exciting, 'cause it's describing these things that we see as normal, as abnormal. And they're actually calling the process of aging, as we see it in America and increasingly around the world, a disease which can be off-putting to some. Some say, "What do you mean aging is a disease?" Well, I mean, look, my birthday is 1959, I was born, I can't change my chronological age, but I can change my biological age. So, I'm chronologically 63, but I'm biologically 43 based on emerging new tests that we can do to look at our biological clock.

And you can change your biological clock. You can't change your chronological clock, but you can change your biological clock. And so, what scientists have discovered is that there are these 10 underlying things that seem to go wrong as we age, that are underneath the diseases. And then if we work on those, then we can prevent the diseases. For example, Shawn, if I said to you, "If we eliminated all cancer and all heart disease, the number one and two killers in the world, from the face of the earth, how much longer could we expect to live?"

**SHAWN STEVENSON:** I read your book. So...

**DR. MARK HYMAN:** You are cheating?

**SHAWN STEVENSON:** Seven more years?

**DR. MARK HYMAN:** You're cheating, right? It's like five to seven years.

**SHAWN STEVENSON:** Yeah.



**DR. MARK HYMAN:** But that's not very long when you think about the two major killers.

**SHAWN STEVENSON:** Right. Exactly.

**DR. MARK HYMAN:** But how do we get to 120, not just 85.

**SHAWN STEVENSON:** That's a big jump.

**DR. MARK HYMAN:** That's a big jump. So, but when you look at these diseases underneath them are these dysfunctions, we call the hallmarks of aging. What's unique about what I've written in *Young Forever*, my book is that I don't just talk about what the hallmarks of aging are, and I'll describe those, but what the underlying causes of those hallmarks are. So functional medicine just goes to the cause of the cause of the cause. So, the thing that typically scientists in longevity are working on are things like, how do we address DNA repair and DNA damage? How do we improve our epigenome? And I can talk about that, which is the control mechanism for our gene expression.

How do we fix proteins that are damaged? How do we deal with cells that are aging? We call zombie cells. How do we improve our stem cell function and production? 'Cause our stem cells get tired. How do we improve our mitochondrial function, the energy that we make in our bodies? How do we regulate these nutrient sensing pathways that control so much of longevity that regulate our response to our food, the sugar and protein we eat? How do we deal with inflammaging, the process of inflammation that goes on with aging? How do we look at our telomeres and understand what causes them to shorten? When you have short telomeres, which are the little caps at the end of your chromosomes that control, you know, replication of your DNA, when they shorten, you shorten your life. So how do we begin to kind of think about these things?

How do we look at the microbiome and aging, which is a 10th hallmark of aging that I added to my list. There's nine typically classically ones that are described but I added the microbiome. So how do we begin to think about looking at these, assessing these and then intervening to optimize the function of these different systems in the body? So, for the first time, Einstein said, "I'm not interested in the spectrum of this or that element. I want to know the thoughts of God. The rest are details." So, in a sense, for the first time, we're getting a window into the mind of God to understand the natural laws of biology, how our bodies function and work.

**SHAWN STEVENSON:** Yeah.

**DR. MARK HYMAN:** And the problem with most research in the entire NIH budget is it's focused on diseases. It's not focused on health and on the actual mechanisms of aging. It's like a stupid

little amount of money. It's a couple hundred million dollars, which is dwarfed by, for example, the cancer budget, which is 6 billion. But if we dealt with the aging process, we deal with the cancer. So, we in functional medicine are trying to understand what these causes are of the hallmarks, which are the causes of disease. And it's really, really quite simple. It's, we're dying of too much of this bad stuff and not enough of the good stuff. So that's ultimately what we have to do is identify for each one of us, what is the bad stuff we're exposed to and how do we get rid of it, whether it's poor diet, stress, toxins, allergens or microbes, and what are the things we need to add in the right foods, nutrients, sleep, exercise, restorative healing, things that help us manage stress. A connection, community, meaning, purpose. These are all the ingredients for health.

**SHAWN STEVENSON:** Yeah.

**DR. MARK HYMAN:** So, when we do that, we can reset these ancient pathways. And what's so exciting about the science of this is that we have our own innate healing systems. When you cut your skin, it heals. You don't have to go, okay, skin, I want you to fix that cut by Thursday. It just knows what to do. But that goes on inside us too. And we can learn how to activate these ancient longevity switches, these ancient pathways that are embedded in us, that are designed to keep us well and healthy and live a long time.

**SHAWN STEVENSON:** Wow. Wow. You just said the ingredients of health.

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** And so, if we have the right ingredients, we're going to have an entirely different recipe turn out.

**DR. MARK HYMAN:** Exactly.

**SHAWN STEVENSON:** Right. And that's what we're seeing really with humanity right now.

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** We're changing the stuff that we're made of the inputs, not just the food that we're made of.

**DR. MARK HYMAN:** Everything.

**SHAWN STEVENSON:** Right. But also, all of these other inputs. And when it boils down to it, and this was one of the best things about the book, you kept reiterating this point. Essentially, we've, in medicine recently, we keep isolating into more and more and more parts.

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** And then we have specialists for all of these different things. And oftentimes of course, they're not communicating appropriately with, and none of them is getting to the root cause because oftentimes your manifestation of these different symptoms, whether it's dysregulated blood sugar, whether it's inflammation of your joints and pain...

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** It has the same root. Whether it's obesity, whether it's cancer. They often are coming back to the same root cause. That's not being addressed because we're not looking at you as a whole person.

**DR. MARK HYMAN:** Exactly. Exactly.

**SHAWN STEVENSON:** Wow.

**DR. MARK HYMAN:** And so, I think that's the fundamental problem, we have to break things down into its component parts to understand them, but then we have to put Humpty Dumpty back together again. And I think Medicine just got so over-specialized and so focused on individual diseases without understanding that they are all sharing common roots. Right. Every disease of aging, for example, is often influenced by insulin resistance and inflammation and mitochondrial dysfunction and oxidative stress and abnormal proteins. And so, begin to kind of pull the veil back and you're like... You look at all these conditions and they're all so similar. The Alzheimer's and diabetes and heart disease, and these are all really one disease with different manifestations.

**SHAWN STEVENSON:** Can you talk about, you just mentioned one of these hallmarks of aging and inflammaging specifically. Let's talk about that.

**DR. MARK HYMAN:** Yeah. So, we've discovered in medicine that inflammation seems to be a common phenomenon across all age-related diseases. And aging itself, even if you don't have a disease, people who are older seem to be just more inflamed. If you measure blood work that measures inflammation, it's just... They're just more inflamed. And if you have heart disease and cancer and diabetes and dementia, these are all inflammatory diseases. So, then the question is not how do we shut off the inflammation, but what's causing it? Right? It's not

about taking more aspirin or Advil or a steroid or some immune suppressing drug, which by the way has been tried on a lot on these problems it doesn't work...

It's based on this simple rule of finding the cause. And in functional medicine, we talked about the tack rules. If you're standing on a tack, it takes a lot of aspirin to make you feel better. Take out the tack, right? So, what causes inflammation? Well far and away, the number one cause is our modern diet. It's our ultra-processed, high starch, high sugar, refined oils, food additives, toxic pesticides, all this crap in our diet that's driving massive levels of inflammation.

**SHAWN STEVENSON:** It's just throwing fuel on the fire.

**DR. MARK HYMAN:** It's just... It's causing the fire. It's like literally when you eat sugar and starch, it increases insulin production that leads to insulin resistance in the body. That leads to more insulin being produced that drives fat into your fat cells. So, all the sugar and the food you're eating, it's driven into your belly fat. That belly fat essentially isn't just, you know, fat cells holding up your pants, there're immune organs, there're endocrine organs. They're neuro... They're brain organs. There's neurotransmitters and cytokines and hormones being produced in these cells. They call them adipocytes or... And they produce adipocytokines, which are inflammatory chemicals. So, when you look at somebody who's overweight, who has belly fat, they're producing high levels of these cytokines we've heard about with COVID, these cytokines storms. So literally this is like a fire in the belly, and that fire spreads throughout the body.

And it... And we know that, for example, Alzheimer's is being called type three diabetes because of how it affects the brain. And sugar in the brain, I mean, is driving much of the Alzheimer's we see. So, this is, you know, and then there's toxins that cause inflammation. There's lack of exercise, there's lack of sleep that causes inflammation. There's stress. Our thoughts can create inflammation. You literally can have inflammation genes turned on by having a conflictual conversation with somebody versus a loving conversation that will turn on genes that calm down inflammation. So, this is not kind of voodoo, you know, woo-woo stuff. It's hardcore science.

**SHAWN STEVENSON:** Yeah. Yeah. And we've... The thing about it too is this has been around for years. Our level of dissemination of this stuff is remarkable today. But there are entire fields of psychoneuroendocrinology. Psychoneuroimmunology...

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** Talking about how our thoughts, our perception stress...

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** Affects our immune system or our production and release of hormones.

**DR. MARK HYMAN:** Totally.

**SHAWN STEVENSON:** Or lack thereof.

**DR. MARK HYMAN:** Totally.

**SHAWN STEVENSON:** And so, we can think ourselves right into disease state and also accelerate our aging process.

**DR. MARK HYMAN:** Totally. I mean, Candace Pert wrote a book called The Molecules of Emotion.

**SHAWN STEVENSON:** Yes.

**DR. MARK HYMAN:** She was an NIH researcher and saw the receptors for neurotransmitters are thoughts on our immune cells.

**SHAWN STEVENSON:** Yeah.

**DR. MARK HYMAN:** So, you are literally talking to your immune system you can lengthen your telomeres by meditating, which is amazing, right? You can cool off inflammation by doing very simple practices. So, I've tried to map out not just the science, and I put enough science in the book to help people understand the why, but then what do you do and how do you do it? So that's what the sort of second and third parts of the book are about. It's about the what and the how so people can take this emerging science and find simple ways to apply it that are accessible to almost everybody.

**SHAWN STEVENSON:** Yeah. Yeah. So powerful. Well, I love that we now have these specific hallmarks of aging to really look at and how are we associating with these things. So inflammaging, another thing that you mentioned, and I don't want this to get glanced over because it's super strange. You said zombie cells?

**DR. MARK HYMAN:** Zombie cells. Yeah. So, what happens is as your cells go through their normal life cycle, your body has a mechanism for killing them and then recycling the old parts. And that's called apoptosis. Sometimes though, the cells don't quite die, and they become zombie cells or what we call senescent cells. And they run around your body not doing anything good except producing loads of inflammatory molecules. So, they're like a fire breathing

dragon that goes around spreading inflammation everywhere. And then they, infect, not actually infect, but like, they basically make other cells, zombie cells. So, they accelerate the population of zombie cells. And as we get older, we have more and more of these zombie cells and they're really hard to kill. And so, there's all sorts of things that...

**SHAWN STEVENSON:** Wow.

**DR. MARK HYMAN:** Now we can do to kill them that we now know that are these senolytic compounds. So is phytochemicals, for example, fisetin, which is one of the ones I talk about in the book, is from strawberries who knew Right? Now if you eat a wild strawberry, you're going to get a lot of it. If you eat a commercialized strawberry probably, not too much. But you can also take it as a supplement. And this seems to be a senolytic killing these zombie cells, hyperbaric oxygen therapy also kills them. Many other things we can do will help kill the zombie cells. So, there's... This is just one of the hallmarks of aging.

**SHAWN STEVENSON:** Wow. Hyperbaric oxygen, for example. A lot of folks are getting attuned to this. Can you give a just a little bit of a glimpse into what it is?

**DR. MARK HYMAN:** So, what often happens is, when scuba divers go scuba diving and they come up too fast, they can get nitrogen poisoning and they call it narcosis, nitrogen narcosis. And that's really dangerous. And so, they develop these decompression chambers to basically quickly put them back under the ocean. So, they basically put them back under like 66 feet of water, which puts all the bubbles back in their blood and dissolves the gas and prevents them from getting really sick. And they pump in a hundred percent oxygen. But it turns out these hyperbaric oxygen chambers are also using traditional medicine to increase wound healing, for strokes, for all kinds of things, diabetic ulcers. But it turns out there's a lot of people using them for researching longevity. And these researchers in Israel found that when they took a group of people and put them in these hyperbaric chambers at two atmospheres, which is about 66 feet under the ocean, usually maybe 60 to 90 minutes and they did I think 30 sessions or, so they were able to kill the zombie cells and increase telomere length more than any other therapy known.

**SHAWN STEVENSON:** Wow.

**DR. MARK HYMAN:** So, I mean, it's cool. These are harder things to get, you know, there's home hyperbaric chambers you can buy for, you know, they're not super cheap, like 10 grand or something. But there's also hard chambers.

**SHAWN STEVENSON:** Yeah. Yeah. So, and again, the demand increases the supply.

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** Or something like this. So, there are centers now, like especially in a place like Los Angeles, you're going to find, you know, entire businesses that have hyperbaric oxygen treatment.

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** One of the people who, our mutual friend, Dr. Daniel Amen.

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** Pointed me towards that for brain health.

**DR. MARK HYMAN:** Absolutely for strokes, for Alzheimer's, for autism, for cerebral palsy, for... You know, Parkinson's disease. Very impressive to see what happens to people.

**SHAWN STEVENSON:** So cool. So cool. Well, I want to, if we could, inflammation is obviously such a poignant topic right now, and I don't, for whatever reason, I don't think we really get it. Because I think that, because it seems like one of those soft science type words. And we've talked about this before and how semantics and lexicon and all these different things, the way the words are used. And so, when I was in school getting my traditional education when I'm in biology and we hear something like inflammation, just say, "Oh, it sounds like a little fire, whatever." It's not a big deal. We take an NSAID. We can take something to reduce inflammation, but we really don't get it. And you said the number one driver of our epidemics of inflammaging has to do with our diet.

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** And it's consumption of these highly refined, ultra-processed foods. So, my question is not only, yes, obviously let's remove the cost, but what has your research found as far as like, are there certain foods that we can start to implement.

**DR. MARK HYMAN:** 100%. And that's what's so exciting is like yes you have to take out the bad stuff, but then you have to put in the good stuff. And so, getting rid of these ultra-processed foods is just so essential. If you want to have a healthy life and a long life and feel good and deal with so many problems we have. But at the same time, you have to add in the good stuff. And what we're learning is that there's so many foods that are anti-inflammatory. So, for example, omega-3 fats that come from wild fish, actually it's from the algae that the wild fish eat that accumulate up the food chain. But it actually is a very important fat that regulates our

inflammatory pathways. Phytochemicals are the other big factor in our diet that are anti-inflammatory. And these are found in colorful fruits and vegetables and herbs and spices. Everything from the compounds in green tea and curcumin and red grape skins and strawberries, and in the pomegranate. All these things have the ability to regulate these ancient pathways. And there's this phenomenon, I kind of coined a term, and it's kind of a mouthful, but it's symbiotic-Phyto adaptation. And essentially what it means is we've co-evolved with plants and have adapted to use their molecules for our benefit.

So, we don't make vitamin C, we get it from our food. We don't make many of these phytochemicals or many of them, but we used them from our diet, and we used to eat 800 species of plants and a huge wide variety of wild foods like they did in Ikaria or Sardinia. It's just part of their natural diet 'cause they had to scrounge and eat whatever they could eat. It wasn't going to, oh, I'm going to eat wild foods 'cause it's better for me. It's like, this is what I got to eat, in the winter I got to find these wild greens. And so, these compounds are everywhere in the plant kingdom that we can consume on a regular basis. So, eating a rich variety of colorful fruits and vegetables is essential for our good health. And then of course there's the whole mushroom family, which has polysaccharides that are immune regulating and adaptogenic and modulate our immune function.

So, there's lots of ways we can hack this. Also having ways that we, not just looking at what we're eating, but when we're eating and we know that, for example the body has its inbred mechanism to deal with starvation. So, when we have a lack of food for a period of time, whether it's 12 hours overnight fast, or 14 or 16 hours or a longer fast, our bodies are so adapted to kick into gear, these ancient longevity pathways to preserve our health and keep our bodies functioning better and to recycle old proteins and to clean up all waste and to shut off inflammation. And it works. So, if you basically just do a simple pause between dinner and breakfast for 12 hours or even up to 16 hours, you can activate these longevity pathways that shut off inflammation, for example, inhibiting this pathway that is a master transcription factor for genes that turns on all these inflammatory signals called NF kappa B. And this is a big medical word, but the point is that we understand the biology and the mechanisms of how this works.

**SHAWN STEVENSON:** So fascinating. So fascinating. But again, this is something that we're not acclimated to. We are living in the society with so much... I was just sharing some data not too long ago on the obesity epidemic in homeless folks. Folks in our homeless population, because these ultra-processed foods are so readily available, we are not living at a time where we are lacking accessibility to food. We're living at a time where most folks are not dying from lack of food, they're dying from the consumption of too much of the wrong stuff. And we're just... We're very... It's changing the ingredients of what's making us up.



**DR. MARK HYMAN:** It's interesting that hunger and obesity go together, and we think of someone who's starving and hungry as someone who's skinny and scrawny, but it's not the case in America. Most people who are facing food insecurity and food scarcity are obese. And it's because they're... When they do get money or they do get enough to buy something, they can afford these incredibly cheap calories that are highly processed, that are subsidized by our government, either through food stamps or through agricultural subsidies to make things like high fructose corn syrup so cheap. I once was talking to the vice chairman of Pepsi, I'm like, "Why do you use high fructose corn syrup? You used to use sugar in Pepsi and Coke?" He said, "Mark, the government makes it too cheap for us not to use it." And they subsidize the production of corn.

And so, we just are in such a bad situation where we're dealing with these sort of dual epidemics of hunger and food insecurity and food scarcity, as at the same time we're dealing with obesity and diabetes and things we think are from excess. So, it's an excess of the wrong stuff and a lack of the good stuff.

**SHAWN STEVENSON:** Got a quick break coming up. We'll be right back. It's no secret that processed food manufacturers have a team of scientists chemically constructing Frankenfoods that are incredibly addictive, but also causative agents of degeneration and disease. It's one thing to tell yourself to stop eating these processed foods. It's another thing to our biology that can actually become addicted to some of these chemical and sweet elements. Well, researchers have recently discovered that there is a natural food element that's able to help our brains and our biology resist the urge to eat hyper palatable, fake processed foods.

A study published in the peer-reviewed journal *Appetite* found that chlorophyll can actually aid in weight loss and reduce the urge to eat hyperpalatable foods. And what's really interesting is that it was also found to increase the release of glucagon-like peptide 1, which according to research published in the *Journal of Endocrinology*, has a potential to trigger body fat redistribution. This means that it's sparking the release of visceral AKA belly fat and increasing the ratio of subcutaneous fat, which appears to be more protective against metabolic diseases. Pretty cool stuff found in Chlorophyll, one of the most chlorophyll, dense foods that you can find, well, anything green is going to have chlorophyll. It's an indicator of the chlorophyll content. But specific foods like Chlorella getting its name from Chlorophyll is really taking things to another level. Chlorella is actually 50% protein by weight. It's complete protein and one of the most protein dense nutrient sources ever discovered.

It also contains carotenoids like lutein and zeaxanthin that have been found to protect our vision from things like macular degeneration. And to top it off, a Double-blind-placebo-controlled study published in clinical and experimental hypertension found that chlorella was able to significantly reduce blood pressure of test subjects with hypertension by the end of

the 12-week study period. So being an actual source of treatment for people experiencing hypertension, something remarkable about it. Chlorella combined that with spirulina, another nutrient-dense super algae, which is 71% protein by weight. And spirulina of course, is also another remarkable source of chlorophyll, along with being rich in B vitamins and copper and iron.

The list goes on and on in the micronutrient ratios. I get them combined together with other powerful super foods in the Organifi green juice formula. Go to [organifi.com/model](http://organifi.com/model). That's O-R-G-A-N-I-F-I.com/model.

You get 20% off their incredible green juice blend. Their red juice blend is amazing as well. My kids love it. Their gold is remarkable. Just everything that they carry, they're doing things the right way, organic, low temperature processed to help to retain the nutrients and they taste fantastic. Go to [organifi.com/model](http://organifi.com/model) for 20% off. Now, back to the show.

You mentioned earlier about nature's, of accessibility, especially like you and your trip to Sardinia and seeing folks were eating what was in their environment. And there's certain things that we don't produce, like we don't make vitamin C and it's because we evolve with pretty abundant access to vitamin C. It's in so much stuff.

**DR. MARK HYMAN:** Yeah, for sure.

**SHAWN STEVENSON:** Where there are species, like a lion for example, they make vitamin C. They're...

**DR. MARK HYMAN:** Yeah. Most species do except I think humans and Guinea pigs.

**SHAWN STEVENSON:** You see what I'm saying? So, like this is pointing to like we didn't need to use any energy to do that or kind of cellular memory. Because it's so abundant. Now what happens when you don't have access to that? So, this creates the phenomenon like you just mentioned, where we have this abundance of abnormal calories, but we're lacking the things that actually are required for health. Right?

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** So, if you're not getting vitamin C from that f\*cking honey bun, like you're going to... You're essentially starving. Right?

**DR. MARK HYMAN:** Yeah. It's so true. And it's just... I don't think people understand that the thing that is the biggest driver of so much suffering and disease in the world and the cost of

healthcare is food because it's both a poison and it's a medicine. And the food we're eating is a poison, but we have the potential to eat medicine that works faster, better, and cheaper than any drug on the planet. And if I can, I'll just tell a quick story of a patient because I think it kind of illustrates the power of this and people are like, "Oh, this sounds good and yeah, yeah, whatever." But we had a patient come in who was 66 years old at Cleveland Clinic. She joined one of our groups, it was a support group for healthy lifestyle change. And the basic diet was what I recommend for my patients who are struggling with chronic inflammation and chronic disease, which is a very anti-inflammatory.

Whole foods nutrient-rich, phytochemical-rich, good fat diet. And I got her off all the junk she was eating, but she was type-2 diabetic, 66 years old on insulin, heart failure, kidney failure. She was headed for a kidney transplant and a heart transplant, and she had high blood pressure, polymeds, her co-pay was 20,000 a year. So, who knows what the other costs were, right? She probably was costing the healthcare system hundreds of thousands of dollars, and we simply changed her diet.

And in three days she was off insulin. Her A1C, which is a measure of your average blood sugar for six weeks was 11, normal is six or less, really. And hers within a couple months was five and a half. She reversed her heart failure, which doesn't happen, reversed her kidney dysfunction, which doesn't happen. Her fatty liver resolved; her high blood pressure normalized.

She lost 43 pounds in three months and then over a year she lost 116 pounds. And it was just through the power of food as medicine. There's no drug on the planet that can do that. And so, it's not about just preventing disease, it's not about just managing disease. We're taking people, literally at the end stage of diseases and bringing them back to optimal health. Now there's sometimes you can't do that if the heart muscle is just full of scars and your kidneys are already nuked. But it's amazing how the body has this capacity to regenerate.

And so, what I want people to understand is that embedded within you is the secret to longevity. It's like Dorothy with the Ruby red slippers, you just had to click her heels three times and she'd get back to Kansas. All we have to do is understand these mechanisms and how to turn the switches, which we can do. If you go in a dark room and you don't know where the light switch is, you're screwed. But if you know where the light switch is, you can turn a light on. That's what I want to show people is this is not some futuristic idea. And the futuristic stuff's kind of cool. And that may be coming like longevity escape velocity where we may not even have to die. But I don't even go in there. I'm just talking about the basic stuff and get us to 120.

**SHAWN STEVENSON:** Yeah. Yeah, man. That story also of your patient, such a great story. And this is one of the things that, you really helped to turn on a light switch in my own thinking,

because we come into this situation and we're, seeing all of this disease happening around us, and we... And this is of course, I'm way past this thinking now, but it's still very prevalent, which is in medicine and in health, we have this very strange belief that things are spontaneous, or we don't know what the root is. Right? So, we for example, like this is something that just happens.

**DR. MARK HYMAN:** I got diabetes, well, I caught it from what? I caught it from the newspaper or what?

**SHAWN STEVENSON:** We don't know what caused it. And we don't talk about... As healthcare professionals, we don't talk about the cause. As a matter of fact, you doing that early on and you're one of those people, you were out saying things that can get a lot of vitriol by saying, "Hey, we can reverse diabetes." Right?

**DR. MARK HYMAN:** Oh my God. Yeah.

**SHAWN STEVENSON:** And so, there's a time when that wasn't even appropriate to say.

**DR. MARK HYMAN:** And I'm on quackwatch.

**SHAWN STEVENSON:** So, could you talk about that paradigm of, for example, not being able to outwardly say like, "This is curable," because it's not curable because there isn't a drug that cured that by the way.

**DR. MARK HYMAN:** Yeah, and I mean, it's true. This is the thing is, you know, there's a lot of people looking at longevity drugs, but unless you fix those underlying things like we did with her, with food and, you know, there's no drug on the planet that could cure that. She was on all the diabetes drugs. It wasn't curing her diabetes. And so, doctors, it's no fault of their own. We have no nutrition education and we've never seen this happen.

So, if you've never seen a zebra, it's hard to believe that a zebra exists. But if you see zebras every day, you go, "Of course there's a zebra." So, every day I see people reversing autoimmune disease and heart disease and dementia and diabetes and all sorts of things that are chronic diseases. Meaning chronic diseases, in medical terminology, means you can't cure it. You just have to take care of it as best you can. That is just so not factually true when you look at the data, and this is...

**SHAWN STEVENSON:** That's called giving up as well.

**DR. MARK HYMAN:** And it's not just my opinion. I mean, there's just study after study that shows this, like the work of Sarah Hallberg and her colleagues, sadly she died of cancer, but she showed that with ketogenic diets, they could take type two diabetics who are far advanced on insulin and completely reverse it in over 60% of cases. Now, when you think that this is the biggest driver of our healthcare costs, it's one of three Medicare dollars. If you look at diabetes and obesity, which I call diabetes together, it's over \$3.7 trillion of our economy. It's insane. And it's optional. It's not like... Listen, COVID happened. I can't get rid of COVID. It's a thing, it's like a virus. It's going to be there, but this is a completely avoidable problem.

**SHAWN STEVENSON:** This is speaking to... I literally just wrote this down, that connection with inflammation and COVID.

**DR. MARK HYMAN:** Yeah, let's talk about.

**SHAWN STEVENSON:** That really helped to clarify that because, so I shared this study with so many people and even Tony Robbins, like he ended up putting some of the data that I put out there into his most recent book. And this was a study is... And the thing is if you weren't on top of it, you might have missed it, it's published by the CDC huge meta-analysis. They looked at over 540,000 COVID-19 patients from over 800 US hospitals. They looked at this huge dataset. They found that the number one risk factor for death was obesity. Right? Clearly, number one. Number two was anxiety and fear-related disorders was the second leading risk factor for death from COVID, which speaks to that the mind component and stress. And the third one was diabetes and its complications, but that obesity component, it was like radio silence.

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** From all the news broadcast from the so-called health officials.

**DR. MARK HYMAN:** It's quite amazing, right?

**SHAWN STEVENSON:** And you made the connection earlier with inflammation and obesity so that it's not a mystery why there's such a high...

**DR. MARK HYMAN:** No.

**SHAWN STEVENSON:** Susceptibility with that particular condition.

**DR. MARK HYMAN:** No, I mean, I honestly, Shawn, I saw the early data coming out, in March, 2020, I wrote an editorial for the New York Times. It got rejected by them, but it got published in the Boston Globe, exactly describing this data that show that the people who are most at

risk for COVID were those who were obese or diabetic, or had chronic illness, or who were older. Right? What do all those have in common? Inflammation.

So, we know that if you are obese, you are inflamed by definition. Right? So, these people were pre-inflamed. So, all the COVID did was put gasoline on fire and then it explodes. And that's what happened with these people. And you saw this radically high deaths from people who had inflammatory conditions that were underlying it. And even people who didn't have it, like who were older because of inflammaging, they're at higher risk.

It doesn't mean that everybody who's older is inflamed though. Like you can be a healthy older person and not be inflamed. That's the point. But mostly if we don't change what we're doing, we're all going to be inflamed.

One study showed that 63% of all deaths and hospitalizations from COVID could have been prevented by better diet. That should be like headline news flashing neon times square. And it was like, like you said, radio silence. But Boris Johnson in the UK was the prime minister during COVID, and he got COVID, and he ended up in the ICU and he almost died. And he came out and he says, "Hey, it's 'cause I was overweight, and I was unhealthy." And that's the problem. And he literally created a whole sweeping set of policies to eliminate marketing of junk food and processed food and all these food policies to really try to improve the health of the population underneath it. And it was just a missed opportunity for people to understand this connection between what they're eating and how their bodies are working or not.

**SHAWN STEVENSON:** Yeah, yeah. That would be a good use of a terrible experience to do something like that. And that's what I'm still very hopeful for. And I'm not the type of human being who puts a lot of stock into hope. I'm very much more practicality, let's stack conditions for hope to do its thing. And so, we have a great opportunity. Within crisis, we have the opportunity to do some of these things where we do start to shift policy around and get folks educated. And unfortunately, the broadest message across the board was disempowerment, you know?

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** There's nothing you can do.

**DR. MARK HYMAN:** Oh, it's true really.

**SHAWN STEVENSON:** Except wait around for us to come up with a newly invented drug so that we can save you.

**DR. MARK HYMAN:** Yeah. I mean, vitamin D is a great example. Vitamin D in studies, for example, on biological aging, has shown that if you give adequate dose of vitamin D, you can reverse your biological age using these DNA methylation, biological clocks, which is pretty darn impressive, just taking a vitamin. We also know that if you're low in vitamin D, you're at a risk of hospitalization and death was over 70% higher. And if your vitamin D level was over 50, then your risk of death was zero. Now people were talking about vaccine mandates and mass mandates. How about a vitamin D mandate? You're talking about pennies a dose. Pennies a dose, that could radically change.

**SHAWN STEVENSON:** They were...

**DR. MARK HYMAN:** The health of the population.

**SHAWN STEVENSON:** When I did an episode on it, and I had at the time, 23 peer reviewed studies on the efficacy of vitamin D in the context of COVID.

**DR. MARK HYMAN:** Oh, sure.

**SHAWN STEVENSON:** 2023 at the time, this was...

**DR. MARK HYMAN:** There's no lack of data. It's a lack of the financial incentives that in line to promote it. This new drug comes up like Paxil or a vaccine, and you've got billions of dollars behind these drugs.

**SHAWN STEVENSON:** Billions upon billions.

**DR. MARK HYMAN:** I heard something that just blew my mind that, I might get the number wrong, but it was like Pfizer increased the dose of the vaccine, the cost of the vaccine by like 1000 or 10,000% or something. I'm like, "What?" It's just like this is after the government basically funded it all and gave them billions of dollars.

**SHAWN STEVENSON:** Which when you say that that means we funded it.

**DR. MARK HYMAN:** We funded it, yeah. The government, we funded it.

**SHAWN STEVENSON:** Came from our pockets.

**DR. MARK HYMAN:** Exactly. Yeah, I paid taxes and I want my money back.

**SHAWN STEVENSON:** It's so crazy, and again, even in the beginning with the framing too, they were going to be so altruistic and make sure low cost. Accessibility to poor nations. None of that.

**DR. MARK HYMAN:** No, none of it. No.

**SHAWN STEVENSON:** None of it.

**SHAWN STEVENSON:** It's like, "Forget that this is a cash cow and we're going to milk it for everything that it's got."

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** And again, we've got to be honest and look at the results and look at where... The biggest result for me, this is the most important, where's our health at now today? We are radically even less healthy than at the beginning, radically.

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** The CDC published another study looking at childhood obesity just within that first year. And obese children, their annual rate of weight gain went from 8 pounds to over 14 pounds. Children who were moderately obese, their rate of weight gain doubled in the context of that small window. And even children who were at a healthy weight, their annual rate of weight gain went up by a couple pounds as well. Now we might think, again, this is temporary, but then we have recidivism. Once we turn on these programs of obesity...

**DR. MARK HYMAN:** No, it's hard to...

**SHAWN STEVENSON:** In our children...

**DR. MARK HYMAN:** Turn them back.

**SHAWN STEVENSON:** It's very difficult to change that as time goes on, especially in this society.

**DR. MARK HYMAN:** An overweight kid has a 13 years left less of life expectancy than a normal weight kid. That's frightening. If life expectancy is 75, you're talking about like, mid 60s for these kids, or younger, a lot of the times.

**SHAWN STEVENSON:** That's another way of cracking the code here with longevity is what we can do as conditions in our family cultures.



**DR. MARK HYMAN:** Totally, well, it's our family culture, but it's also the bigger culture, the toxic food environment, the default choices that we have, the lack of access, the food deserts. The lack of awareness and education. It's all driving these avalanches of chronic disease that's accelerating aging and early death. At the same time, we're on the precipice of this extraordinary discoveries that can help us live to 120, we're seeing our life expectancy go down for the last three years for the first time in history. And during COVID it went down even more.

**SHAWN STEVENSON:** It's a paradox.

**DR. MARK HYMAN:** It's like, "Wait a minute. What's happening here?" The one fact that should blow people's mind about COVID is that in America, we're about 4% of the world's population. We're about 16% of the cases in deaths.

**SHAWN STEVENSON:** Red flag.

**DR. MARK HYMAN:** What's up with that? It's not like we don't have good healthcare.

**SHAWN STEVENSON:** Red flag alert.

**DR. MARK HYMAN:** It's like, wait a minute. It may be because we're eating the wrong crap that's making us inflamed and sick and susceptible to getting sick and dying.

**SHAWN STEVENSON:** Yeah, yeah, again, we have the highest rates of you name it, a plethora of chronic diseases, obesity, diabetes, heart disease. The list goes on and on. Just as a nation, it's normalized to be unhealthy. And so, you're weird Mark, being a healthy individual and also, but here's the thing, like you just said, there's this strange phenomenon where we have these two very different life tracks taking place and they're existing at the same time. And I think it's actually beautiful because this is what humanity tends to do. We create a problem and the solution manifests. And so, we're not looking at just surviving, but how can we thrive and extend our lifespan, but also our health span. And you just mentioned that culture expanding just out even outside of our own household, but to the communities at large and what we're exposed to. So now we're talking about the science around the epigenome. And you mentioned that as one of these hallmarks of aging. So, let's talk a little bit more about that.

**DR. MARK HYMAN:** Yeah, so this is a little bit techy, but we'll get into it. But the body has a set of genes. It's called your genome. And you get about 20,000 genes. And that's pretty fixed. Now we can do gene editing and fancy stuff, but that's not quite here yet. What controls those genes is more important than the genes themselves. This is called the epigenome, which means it lies above your genome. And these are like little bookmarks in your book of life. These

are little tags on your DNA that regulate which genes get turned on or off. Are you going to turn on the longevity genes or the aging genes. Or the health genes and the disease genes and the epigenome, think of it more like the genome as your piano and you've got 88 keys, but I can play ragtime and jazz and rock and Mozart, whatever you want. The piano player is the epigenome.

And we have massive control over the epigenome, by what we eat, by exercise, by our thoughts, by stress, by sleep, by our nutrient levels, our toxic exposures, our microbiome. All these things are washing over our genes and controlling them by influencing the epigenome. So, the biological clock, the thing I said where I'm 43 biologically, but 63 chronologically, that's by measuring my epigenome and the DNA methylation clock, which is your biological clock. And that I can change. So, I'm 43, but I'm going for 25 we'll see how it goes. I don't know if I'll get there, but that's the possibility we have. And I've just been living a healthy lifestyle for a long time, and I haven't really started really fully embracing some of these longevity strategies that are next generation. So, I'm excited about it 'cause I got to 43, just doing the basics, right?

So, what if I add up all these other stuff and take these biochemicals or NAD derivatives or maybe rapamycin, which is a new compound that may be helping to regulate aging. Or maybe I can do transfusions, getting my plasma exchanged so I don't have to have all this old blood and kill my zombie cells, maybe stem cells or exosomes or peptides or hyperbaric oxygen or ozone. All these cool things that are emerging. So, I'm starting to experiment with these things and seeing how they affect me, and I'll let you know how it goes.

**SHAWN STEVENSON:** Yeah, oh man, it's so awesome. But the most powerful thing right there was that just by doing the basics, you're biologically so much younger.

**DR. MARK HYMAN:** 20 years younger, yeah.

**SHAWN STEVENSON:** That is so powerful, and it's very inspiring too, so in this expression with... You just gave a great example, an analogy with the piano, and we could change out the piano player. So, we can have like with your life choices, have like Ray Charles playing your piano, or you can have a f\*cking cat.

**DR. MARK HYMAN:** Right.

**SHAWN STEVENSON:** On the piano, like banging keys. And the out picturing of your health is going to be very different. And so, no disrespect to the kitties out there by the way. No disrespect. But there's like...

**DR. MARK HYMAN:** They're not known for their musical composition.

**SHAWN STEVENSON:** It's a great... Right. They'll jump onto a piano and freak you out. But the bottom line is we have more influence on this way more than we ever thought.

**DR. MARK HYMAN:** Way more than we ever thought. And the other thing I want people to understand, Shawn, is that disease is not an inevitable part of life. If we understand how to activate our healing systems, our body has in built-in software for repair, renewal, regeneration, and longevity, we can activate these ancient systems. And we have so many doorways in, and that's what my book *Young Forever* is about. It's about how to activate these systems through different technologies, whether it's food or exercise or stress reduction or sleep optimization or nutrient intake, or maybe it's advanced things like hot and cold therapy, sauna, cold plunges ozone, hyperbaric oxygen, all these amazing things that we now know work on these same ancient pathways that were designed to keep us alive when things were rough.

**SHAWN STEVENSON:** Yeah. You even shared in the book some statistics on diseases as we age. And the percentage of folks, the thing that stood out to me the most was there's a percentage of folks, a nice chunk who don't get a chronic disease. Because what's most startling is the majority who do, but then we immediately, when I see that though, I think about what people think and what I used to think, which was, oh, they just have better genes.

**DR. MARK HYMAN:** No way. No way.

**SHAWN STEVENSON:** Right. That's why they didn't get a disease.

**DR. MARK HYMAN:** No way. I think it's really about... Look, my family has a big history of cancer and heart disease, and my dad was overweight and my grandpa was overweight. And my mom was overweight, my mom was pre-diabetic, but it was their lifestyle. Of course, they didn't listen to me 'cause I was their son [laughter] But I think that... I have a very different body than... Really if you look at my dad and my body when we were younger, it's the same. But he ended up very different at the end. And I'm actually fitter and more muscular than I was when I was 30 or 40.

**SHAWN STEVENSON:** Wow. Amazing. That's what's possible.

**DR. MARK HYMAN:** I'll show you a before and after picture. You won't believe it.

**SHAWN STEVENSON:** Oh my gosh...

**DR. MARK HYMAN:** And it wasn't that I was overweight.

**SHAWN STEVENSON:** Before we even got started, you showed me a picture. I'm just like, Mark...Again, it's very different from what we are perceived. I was thinking about this paradigm today we have of the dad bod. It's just like, it's this template. This is the evolution of a man today. But there is such a plethora of possibilities, and we get to choose each of our choices are guiding what's happening with who's playing the piano. And this is going back as well to saying this point, I want to make. With that percentage of folks who don't have the onset of a chronic disease, we need to reframe our perception of what a disease is because we have this degree of permanence that we put with it. Which for example, I was 20 with an advanced arthritic condition of my spine. And I no longer have it. I was throughout my entire childhood in and out of the hospital annually for asthma. I don't have it.

**DR. MARK HYMAN:** There you go. There you go.

**SHAWN STEVENSON:** It's just like... But I could have bought in fully to the belief this is who I am. I am an asthmatic...

**DR. MARK HYMAN:** I am an asthmatic.

**SHAWN STEVENSON:** Arthritic like just slather me with labels. So, I'm just walking around with all of these bumper stickers on me of disease states. When these things don't have to have a permanence for the most part. And just to be clear, let me share the latest size that we have. Approximately, no more than 5% of all of our chronic diseases are actually attributed to true genetic defects. In the case of something like Alzheimer's. And this is coming from top neuroscientists who you have on the show, for sure, less than 1% of all Alzheimer's cases, which is creeping its way into the top five leading cause of death in the United States is actually due to true genetic defect. For sure. There's so much determined by our lifestyle.

**DR. MARK HYMAN:** Look at obesity itself. We've got like 75% of the population that's overweight. 93% that's metabolically unhealthy. So, there's even... Were called skinny fat people, they look thin, but they're actually metabolically fat on the inside. So, you've got 6% of the population, more or less that's healthy. And you look about a hundred years ago, or even in the 1970s, I saw that Aretha Franklin movie, Amazing Grace. It was amazing. It was filmed in the 1970s. There wasn't an obese or overweight person in the entire audience of African Americans in the church.

**SHAWN STEVENSON:** That's amazing grace in the audience. That's amazing.

**DR. MARK HYMAN:** And now there's not really an African American population that's spared. 80% of African American women are overweight. That's terrifying.

**SHAWN STEVENSON:** The hardest of every population. That is the most pervasive.

**DR. MARK HYMAN:** And you know what's interesting. They were more healthy in the '60s than Whites and now it's the reverse. So, it's not a genetic problem. If we look and they've identified all the genes that relate to obesity and they... If we fixed all those genes, if we had some magic editing tool, we could correct all those genes. It would at most account for a 22-pound weight loss.

**SHAWN STEVENSON:** Wow.

**DR. MARK HYMAN:** Which doesn't account for all the rest of the obesity.

**SHAWN STEVENSON:** That's what we've spent time doing in science is just like trying to find that fat gene. And then we can try to find some kind of drug or edit it and just see how then it's going to be the solution. The solution is vinegar.

**DR. MARK HYMAN:** Listen, I wish there was a pill. I'd take it 'cause I want to eat all the ice cream I can, but I'm not going to.

**SHAWN STEVENSON:** The solutions have existed for forever. We know the potential of the human body and human health. We've got incredible people have come before us and cultures, I'm just thinking right now of the physical culture of like the ancient Greeks and also even going back to the ancient Egyptians and just the things that were implemented into culture. I remember I came across a report before on even intermittent fasting, essentially back in the time when the Roman Empire was happening and eating early in the day was frowned upon because...

**SHAWN STEVENSON:** It was just part of the culture to where you're eating into the afternoon instead of just first thing when you get up. It's a new invention and really, even the...

**DR. MARK HYMAN:** Snacking is definitely not a thing in most of the world. [chuckle] snack foods is like, we don't need snack foods if we eat right.

**SHAWN STEVENSON:** And even in the age of the monastic life and eating before mass, for example, unless you were sick or a baby, you know, like you're eating after mass. And so, but in our culture today, breakfast has become a marketing ploy where it's the most important meal of the day. You got to get fueled up on cereal.

**DR. MARK HYMAN:** Cereal.

**SHAWN STEVENSON:** On oatmeal, on orange juice. Part of a balanced breakfast. They said balanced breakfast, Mark on the commercial, it's a bowl of oatmeal. It's a glass of milk, a glass of orange juice and some toast. How are we going to do during the day, Mark? How are we going to...

**DR. MARK HYMAN:** It's so bad, it's so bad.

**SHAWN STEVENSON:** How are we going to perform.

**DR. MARK HYMAN:** If you want to die, that's the way to do it.

**SHAWN STEVENSON:** Brought to you by Kellogg's. So I want to talk, I know this is one of the big things I wanted to talk to you about having you here, because... Again, much like inflammation, I think that because it's invisible in a sense, we can see some of the symptoms of inflammation for sure, right? We can if we have an injury to a body part, right? But oftentimes we don't really see it. So, I think it's part of the reason there's this cognitive block that holds true for stress as well. We know very well that you could stress your way into having more body fat or even into obesity.

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** But because it's calorie free...

**DR. MARK HYMAN:** The fat cells are listening to your thoughts.

**SHAWN STEVENSON:** Let's talk about that, because this is a big, if we're talking about the ingredient list for having a recipe of true longevity, health span and overall lifespan, stress is a big part of this.

**DR. MARK HYMAN:** It's huge, yeah. It was interesting. It reminds me of when I was in Sardinia, I went to visit this guy Silvio, who lived on the top of this mountain, and he was a shepherd and had 200 goats and sheep. And his family had lived there for centuries. His family lived there altogether with him. And they decided to have a little kind of restaurant at the top of the mountain. And so, they would have all the food that they grew, they would have their goat milk and sheep milk, and they would have their goats and sheep that they occasionally served, and they would have their minestrone soup. And it was such a beautiful culture. And we sat there, had this beautiful meal with him, and I, so I talked to him, I said, Silvio, tell me, do you have any stress in your life? And he looked at me like it was the weirdest freaking question you've ever been asked. And he thought for a minute, it took him a minute. And he was like,

Hmm. Well, he says, yeah, sometimes, sometimes in the middle of a night, a goat gets loose, and I have to go get it. And I'm like, "Oh God"... it's...

**SHAWN STEVENSON:** That's what you're going to come up with. Wow.

**DR. MARK HYMAN:** It's like they don't even have a concept of chronic stress. They just live life and they're full of joy. And they're present, they're connected. They're not on their computers and their phones. They're not striving to do anything. They're not starting a new company and doing this thing. And it's just not that that's bad. It's just like they're just living and they're living a connected life to the earth, to each other, to themselves. And so, the concept of stress is almost foreign to them. And yet it's such a powerful driver of disease.

**SHAWN STEVENSON:** So why is mental health and stress and the opposite, you know, like having a sense of purpose and connectedness, why is this so important to longevity?

Well, I think it works through these biological pathways, these ancient systems. And we now know, for example, that being part of a community, that having social connections actually influences gene expression. It's called sociogenomics, which is how our social relationships influence our gene expression. So, if you're in a connected, loving, engaged relationship or community, your genes are all anti-inflammatory and they're getting turned on to stop disease. Whereas if you're, alone in isolation, I mean, loneliness is one of the biggest risk factors for death and for disease. So, the data is all there, and we understand the way it's transferred into our biology by increasing inflammation, by increasing cortisol and stress hormones by which causing our microbiome to degrade, causing our proteins to malfunction, causing our epigenome to become dysfunctional, causing our, our DNA not to be able to repair itself and our stem cells to not function. I mean, this is all hard science. I'm not making this junk up. It's just, it's there. The book has I think, 400 or 500 references in there. I only had to leave so many out 'cause my editor was like, the book's going to be too long. You're going to have to not put those references in. I'm like, okay, fine. But it's all in there.

**SHAWN STEVENSON:** So, we've got Young Forever and there is absolutely mind-blowing information in here. And of course, you take us on an adventure too, the adventure to through Sardinia was so awesome to read and it just like, I felt like I was walking with you.

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** So, the thing about you, you're writing these books, it is you...

**DR. MARK HYMAN:** Yeah.

**SHAWN STEVENSON:** And you're telling these stories...

**DR. MARK HYMAN:** Totally.

**SHAWN STEVENSON:** And the authenticity is there and you're a great writer, but the information is a game changer. Now obviously we cannot consolidate everything that's in here, which everybody needs to pick up a copy like yesterday, Young Forever. But what are three things that really jump out for you, that you think everybody should know? It should be taught to our children; it should be taught in schools that can help to solidify and encourage more longevity.

**DR. MARK HYMAN:** I think it's really pretty simple, Shawn. I think the first thing is, eat an anti-inflammatory diet and that means cut out all the crap and really dramatically reduce sugar and starch. So, think of it as a recreational treat. You want to have something sweet once in a while, fine. Not a staple. So, it's like having a drink of tequila. I might like it, but I'm not going to do it three times a day. I might have it once a week or once a month. Increase the phytochemical richness of your diet. Take advantage of all the food.

That has these rich medicines in it that activate these longevity pathways, which I describe in the book. Exercise is just not optional. It's just not. If you don't exercise, what's going to happen is you lose muscle, you lose fitness and muscle is the currency of aging. And we know that as we age, we lose muscle even if we don't lose weight. So, we can stay the same weight but be twice as fat. When you have marbled rib eye muscle, it doesn't work right and it creates inflammation and changes your hormones, lowers your testosterone, raises, stress hormones, all this bad stuff that makes aging go fast. So, building muscle is key and maintaining muscle is key.

And that means adequate protein in your diet. So, you need protein to build muscle and you need the right kinds of protein at the right times. And as we get older, we need more protein because we get something called anabolic resistance. Our muscles resist getting stronger, but it doesn't mean they can't. And what I've been most excited about is some really recent studies that are so compelling showing that even in your '60s, you can maintain high levels of fitness and performance equal to a 30-year-old. And I know this 'cause like I ride my bike a lot and now I'm out with my 30-year-old friends and they're like, I'm turning back and I'm like, let's go. I like was riding up a 7-mile straight hill and my 40-year-old friend who was a professional, faculty professional soccer player, she couldn't keep up with me.

**SHAWN STEVENSON:** Amazing.



**DR. MARK HYMAN:** The body has that capacity if you train it, keep your muscle, keep your fitness. And the last one I would say would be, I would say, positive stress. And what I mean by positive stress is this idea of hormesis, which are these little stresses that take us out of our comfort zone, that activate these ancient pathways. So, we, never lived in these perfectly temperature-controlled environments where everything was perfect. And even though we had no stress, we lived in a rough world, we lived out in nature, and we had to deal with hot and cold extremes.

And so hot therapy like saunas and cold plunges, great, you could take a cold shower in the morning and a hot bath at night if you don't have fancy equipment, exercise is one of these stresses. Calorie restriction or time restricted eating is a stress, hypoxia, which is another one you can do, just get these masks for like 50 bucks and you wear it while you're exercising or you're working at your desk to restrict oxygen, and that can activate your mitochondria repair. So, there's all kinds of things like that. And I think just a basic panel of supplements that I talk about in the book that can help, actually provide the basic nutrients you need for longevity.

**SHAWN STEVENSON:** Amazing. If anybody is walking the talk, it's Dr. Mark Hyman, everybody picks up a copy, go to [youngforeverbook.com](http://youngforeverbook.com) and depending on when you're listening to this, you can get some pre-order incredible bonuses there. And if you're listening to this after pub date, which comes out February 21st, 2023. And it's going to be a huge bestseller. For sure...

**DR. MARK HYMAN:** Thank you. Thank you.

**SHAWN STEVENSON:** The information in here is a game changer and it's consolidated in a way that only you could do.

**DR. MARK HYMAN:** Thanks, my friends.

**SHAWN STEVENSON:** And this is why I appreciate you so much. And man, thank you so much for coming by to hang out with us.

**DR. MARK HYMAN:** My pleasure. It's great as always.

**SHAWN STEVENSON:** Awesome. The legend, Dr. Mark Hyman, everybody, thank you so much for tuning into the episode today. I hope you got a lot of value out of this. Definitely head over to [youngforeverbook.com](http://youngforeverbook.com) and take advantage of the pre-order bonuses. He always overdelivers and I promise you that this book is going to be a great addition to your library, but please take advantage of those bonuses because they're always something cool to add in. And also, of course you can check Mark out and follow him on social media and just truly one of the greatest teachers.

For myself personally, I came across some of Mark Hyman's work when I was living in Ferguson, Missouri. And I just started my practice as a nutritionist, and I couldn't believe that there was this decorated MD who was sharing these insights and really pointing out the fact that so much that's being done in medicine today is not leading to the right outcomes for patients. We're simply treating people in a way that's not effective. And he was calling it out and he was talking about truly effective modalities and had all of these cases of people being able to normalize their blood sugar, to normalize their blood pressure and reverse hypertension and improve cognitive performance and all these things utilizing real principles, real food, real movement, things that people can employ in their lives and be empowered.

And that's what I admired about him then. And here we are today, being able to share this message face-to-face and it's really a powerful experience for me and I'm just grateful that you are along this journey with me and trust and believe we got more, so much more in store for you, and you don't have to wait very long. We've got some epic shows powerful masterclasses coming up 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](http://themodelhealthshow.com). That's where you can find all of the show notes. You can find transcriptions videos for each episode and if you've 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 this 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.