

Announcer: Bullet Proof Radio. A state of high performance.

Dave: You're listening to Bullet Proof Radio. Today's guest is TS Wiley. She's an author, a medical theorist, and a researcher now based out of Santa Fe New Mexico, the state where I grew up. She wrote a couple of books that were so far ahead of her time, that I had heard incorrectly during my interview with Dr. Mercola actually that she passed away. I told a couple of episodes like, "Oh no, TS Wiley is dead." I have proof for all of you now that she is not dead, because she's here with me. She wrote these two books. One was called Sex, Lies, and Menopause. The shocking truth about synthetic hormones, and the benefits of natural alternatives. That was in 2003. Her work really influenced some of my thinking when I wrote the Better Baby book, my first book about fertility, where I was talking about the effect of toxins, and on diets, and having proper building blocks, so you could have healthier babies.

One of the chapters there was like, "Hey, if you're on synthetic birth control pills, it's going to be hard to get pregnant. You need to get off of this. You need to fix what's going on with your body." I learned that from reading her book, and before that even was one that just blew my mind called Lights Out: Sleep, Sugar and Survival. This came out in the year 2000. That was when I started playing with my circadian rhythm. TS Wiley is not a doctor. She's actually just a ... I'm going to call her a belligerent researcher, and that is a compliment the way I'm saying it. She researches just with the kind of intensity that's crazy, and I read this book in 2000. I'm like, "This is so crazy." The back third of the book was all her references. Everything is referenced.

Since then, she came up with something called the Wiley Protocol, where it's very carefully timed applications of bio-identical hormones, because guess what? Humans are a system that moves through time. The body you have at the end of this podcast is not the body you had before. You shed some cells. You added some cells. You're more like an eddy moving through a stream, and time matters to the way our brains process information, to the way everything happens. I think she's been one of the early voices putting together a bunch of different things from studies and seeing it differently. Since then, she's presented at Harvard Medical, Keystone Symposium, Chicago Congress on steroid research, testified before Congress on things like this, and really been a behind the scenes, disruptive researcher without a medical degree, which is even more impressive. TS, welcome to the show, and I'm glad that you're not dead.

TS: I'm so glad I'm not dead, too. Thank you very much. I was stunned to find out I was dead that day, and I checked with a few people. I said, "No, no you're not dead." My husband got a USA Today and we did a proof of life with the date on it under my head. We put it on the internet. Many people contacted Dr. Mercola's website and his people, and said, "Would you retract that please? She's not dead." We didn't hear a word back. Not a word.

Dave: I'm happy to correct the fact, because it was actually your daughter came up to me I think at the Boulder of Conference even, and said, "Hey, my mom's not dead." I was so excited. There's so much we're going to get to talk about.

TS: Actually she said, "My mom is so pissed. You said she's dead." That's what happened. You said, "I can fix that." It was funny.

Dave: Yeah, fixing death is something we're still working on. I felt bad about that, but also I was mostly happy, because you are someone I wanted to have on the show for a while because I want to understand what the heck is going on with your brain because you are all over the place in terms of your research. This is also a compliment, in that you look at female hormones. You look at male hormones. You've looked at inflammation, and autism. You're looking at cancer. Now you're doing a lot of work on how the microbiome talks to the brain using sex steroids. On the show, I've talked to Mark Gordon from USC who's referenced some of this stuff about what testosterone does. I know what thyroid and testosterone did for my own brain in my mid 20s, when I had basically none of either off those. You look at all these different problems with a lens that no one else that I've come across has. Why are you like that? How did you get to be this way?

TS: I could tell you about a brain virus I had at one point that honestly ... This is no joke ... I had a virus. Everybody gets herpes, and I had it through my eye. Went into my brain, that's how you cross the blood brain barrier. This was in the 90s. I went to see a big guy at New York Hospital, and he said well either the virus wins or you do. We have nothing for it. They didn't have acyclovir. They didn't have Abreva. They didn't have anything. I lived through it, and when the headaches stopped, I got back to Santa Barbara where I lived for 25 years, and went to see a neurologist. He said you have grown a new head. I said, "I beg your pardon?" He said you have a new lump of tissue around a lesion in your parietal lobe. I said, "Is there room for it in there?" He said yeah. I said, "Well, I'm okay?"

He said, "Your parietal lobe is where you synthesize information." I said oh, good to know. I was interested before that, because my daughter had had migraines, in endocrinology, and I worked with an endocrinologist many people may have heard of named Diana Schwarzbein in Santa Barbara. All of a sudden, reading journals and papers got so much easier. My kids were at the University of Chicago. I have five kids, and at least three of them were there at that point. I would go to the medical library, and I'd order 10 \$600 books, charge them to my ex-husband in the [inaudible 00:06:33] Foundation for the Cure for Everything. They would show up at my door in Santa Barbara. I would sit with them on one side of me, go through them, and when I was done, do them on the other side making notes and doing whatever.

I also worked with a man named Bent Formby, who was a molecular biologist, who is now actually has passed away. I was working on endocrinology and the fact that's everything in a wave. You're seeing me in a wave, a light wave. You're hearing me in a sound wave. Everything about the environment is reported to the nucleus of your cell, and now I will tell you to your microbiome, in waves. That's why the hormones I created are in a wave for men and women because that flat line is the thing you see on a TV show when you're dead, right? Nothing's flat. Everything's moving. How I got interested in crossing disciplines, which was your original question is endocrinology led to molecular biology lead to genomics. Oncology was in there, and I was working with an

oncologist at Sansum in Santa Barbara, Julie Taguchi. All of that led to epigenetics, and I gave lectures to doctors til three years ago.

I'll probably start again. I'm working with a company called InnoVision for CME's. Those lectures are two days in a plantarium, where we turn the lights off and take their phones away and their computers, and make them feel as small as humanely possible. I tell them how the world works. Everything in my head is connected, and you can't explain one discipline separately. You can't talk about hormones if you can't talk about the genes their turning on and off. You can't talk about genomics unless you talk about epigenetics, which is the environment turning things on and off, and now, it's very obvious to me in the new work I've done that it's all about the bacteria who own the planet. You have to realize they've been here for three billion years. They made us, and the plants, and the fish, and the birds because they wanted to walk.

They wanted to feel the wind, and they wanted to fly, and they wanted to swim. Those bacteria control your mind. They tell you what the next thing is to do.

Dave: Those little bastards are embedded in our system called mitochondria, and they're all in our gut, and they are making so many decisions that we think our ours every day. The more I dig into that ... My whole last book was like how do you hack them because those little guys are hacking you every day. The ones that are built in and the ones that are in the gut talk to each other, too. It's interesting but it's not what they taught us in high school, that's for sure.

TS: Well, I have been thinking, too, the last few days about how you'd bio hack these guys, and I'm not sure it's doable. I work with somebody who says what's the product here, and there's no product really I can think of. I mean, you can eat dirt. We can look at things like Rapamune from Easter Island, but it's a matter of timing, as you said. Timing is everything and they built the clock. They built the clock in you. They built the clock in the planet. They're in the Mariana's Trench. They're in Antarctica. They are the original inhabitants of this planet. Those alien voices in your head, they're the deep state. They're the dark web. That's what the bacteria are. You have no idea what's going on.

It's just short of the Matrix. You're walking around at their behest, and when you're no longer reproductive, the real immune system of the planet, theirs, is autoimmunity and you start to fall apart. You get arthritis, you get heart disease, Alzheimer's. There's a million things that will kill you that are autoimmune and inflammatory. That's because you have no hormones anymore, and you're not making them anymore new meat puppets, so they let you die.

Dave: In terms of hacking these guys, epigenetics, Bruce Lipton's work in the field was another big shaper for me. In fact, I just saw Bruce two days ago before I'm recording this. The idea there is that these bacteria are going to listen to the environment around them, and since now we have technology that lets us change our environment, we can change our hormone environment, we can change nutrient environment, we can change our light environment, our temperature environment, our vibration environment, our everything environment if only we know what to do. Those little guys, we can trick

them. In fact, that's the definition of bio-hacking. Change the environment around you and inside of you so that your biology does what you want.

If you want to have healthy hormone cycles, you want to live a long time, you want to get swole, I'm targeting 180 years old. I'm going to trick those little guys into helping me live that long because they won't know what's going on. They won't know what hit them. Who knows? At least, that's my plan.

TS: Well, those alien voices in your head that say walk over there and kill yourself, or isn't she hot, that's bacteria.

Dave: They are, yes.

TS: Yes, and if you don't have the reproductive hormone rhythms, they're pretty sure you're useless. What I figured out and gave a lecture about was when a woman's estrogen should go through her liver and be de-conjugated and broken into E1, E2, E3, and go out in feces and urine, it doesn't ... If she's not young and healthy ... There are four or five groups of bacteria called the estrobolome ...unfortunate name ... that take estrogen and put it back together and send it back into circulation because they would like you to be reproductive. The problem is the one that mostly ends up staying is E1 in the breasts, and that's part of breast cancer.

When you want to hack, I would tell you first no, they're in charge. Second, a little homage, timing is everything. They want you to get up when the sun comes up. They want you to go to bed no more two hours after dark. They want you to eat in season depending on where you live. Your family's ethnic heritage is a microbiome that you carry with you. You have your own and I have my own, okay? Well, whether it's sitting shiva, which is actually a party with food, but sitting with a dead body in many cultures after the body dies, washing the body, all of those rituals are how the bacteria crawl on you, and that's part of your inheritance. When we don't do that anymore, you're breaking a chain of information. Does that make sense?

Dave: It does make sense. We have this new knowledge that oh, when you come into the world, if you're born by C-section, they should take a cloth, a gauze pad, with bacteria from the vaginal canal and put it on the baby to start that inheritance, although some of it was already in there we know. Then, the end of life, I had never actually thought of that but help me understand this because maybe that extra lump in your parietal lobe knows something. Why is it that we seem to systematically work to break that system? We're spraying glyphosate everywhere that disrupts soil bacteria. We're putting all sorts of pollutants out there. We're taking antibiotics. We are also breaking the cycles. Is this a subconscious fight against the man, for lack of a better word? Or, is this just unconscious behavior?

TS: Or, is it them telling you you're not worth anything, go ahead, that we have a new plan, that we're going to wipe the earth. Somebody said to me you're talking about them like their God, and I said well, there's a creator, and if they created us ... I don't know how you want to think about it, but when we wall look up to the sky and talk about heaven,

you realize in Lights Out, you read it, I talk very briefly about big waves in the Pacific carrying to low clouds algae, proteo, archaeobacteria that reproduce in those clouds. When the clouds get hot enough and heavy enough, it rains. Now, the earth is flowing them around the planet, so another way to travel. If they're not going to walk in you, they can go in a cloud. It's very interesting that we all look up and know that's heaven. I think that's interesting.

Go to the light is my favorite one. When you finally die, and they leave you, they get to see the light. They haven't seen the light before. What you hear, and whether it's go spray my lawn with Round-Up, or whether it's I better to run to the doctor, my throat hurts, and get some antibiotics, I'm not sure it's your voice.

Dave: No kidding. Maybe they're like these big meat puppets we made are running rampant. Let's knock them out.

TS: Or, they could be better. Or, we start again. They've done it many times.

Dave: The core thesis behind my book, Head Strong, is that these mitochondria are making ... Mitochondria are a type of bacteria that we incorporated ... that they are making so many decisions we don't know, and I didn't put this in the book but it's part of the 40 Years of Zen personal development and neurofeedback program I run. It's like look, all the voices in your head, all the ego voices, are bacterial voices. They just say three things. Run away from, kill, or hide from scary things right now, eat everything when you're not running away from things so that we don't starve, and when you're done, have sex with everything else. Pretty much all of our ego behaviors that we're ashamed of and embarrassed by come from those stupid little bacteria. If you can get them to behave, even a little bit better, you're happier. I think the ego comes from bacteria, but maybe I'm wrong. Criticize that. Tell me is there merit to it?

TS: Well, when I hear you say the ego, and I started thinking Freud and I started thinking back in the day psychobabble, I think about the fact that your survival ... When I first started working with Taguchi, this oncologist that I work with, we would talk about p53. It's a gene that's the darling of cancer research. Bent and I did publish papers on how hormones affect p53, particularly progesterone. Julie said yeah, but there's mutated p53 and blah, blah, blah, and nothing mutates to die. Remember that. You mutate to live. You change to live. If you aren't changing, and you can't live on a planet they made you anymore, or you're destroying the planet they made you, but they'll be here after us so I wouldn't worry about it, well, they'll just make it again or make it different. There are many planets, many planets out there with worlds like ours, that they made.

They are, as I said, the original inhabitants of this planet, and I'm sure billions more. They're very successful lifeforms, and there are 7,000 kinds of them that we know of so there must be 700,000 of them that we don't know of. They have operon's instead of genes, which are like genes, and they're far more evolved than we are. They work much quicker. They don't go through transcription very slowly of a gene, and then the protein comes, and then we have a receptor. They work faster than that through transducers and enhancers. I took a course on Khan Academy in microbiology before I did my last slide show, so I'm sure I knew what I was talking about, and there's a company called

Arrayit in Silicon Valley, and I've been friends with them forever and they're a gene company. I called my friend there and I said what do you think about bacteria. He said, "I don't think hormones affect them directly." I said, "I think they do."

Hormones report the environment in real time. Light waves, sound waves, wind, you name it, electricity, magnetism. In real time, hormones report. I knew they reported to the nucleus of the cell but turns out they report to the bacteria. He's wrong. It's okay.

Dave: Wow.

TS: His company went public. He's okay.

Dave: Is it possible that they report to both? You see direct cell changes-

TS: Of course.

Dave: Okay, yeah.

TS: Of course, but these are hierarchical. You see the cell changes in a hierarchical fashion, but when I say deep state or dark web, I'm talking about what's really going on, how much time do you have, what are you supposed to do with your life. I don't know about you, but when I started writing books, I had had five children already, and I said to my agent ... I think it was Sex, Lies, and Menopause. I edited it six fucking times ... I said this was not supposed to be my life's work. She said, "How do you know?" I had other plans, and did other things. I thought to myself there's what you want to be, and then there's what the universe wants you to be. That's how you end up. You end up that way, I think, because the bacteria that's part of a deep state, dark web plan that you have no clue about, and if you watch the angles and you follow your instincts, instincts are your gut-

Dave: They come from sensing the environment around you.

TS: Well, they come from the word of the creator sensing the environment around you. That makes instinct. That means do this, do that, try that. What I'm figuring out about the end of the balanced equation, and my equation was not balanced when I stopped at genomics. Estrogen hits G1 arrest and progesterone turns on p53. I can tell you all the genomics. I didn't go far enough to what really runs us. There's this wonderful paper some woman wrote. She had to be 19 or something. It's just her doctoral thesis, but it's not published, but don't worry about it. She took women from age two to age 72, through pregnancies, breastfeeding, all the phases of tipping points genomically in a woman's life and looked at the bacteria in their guts and how it changes. Does it change, or does it change them? What happens? It's a great paper, and it was done by some college student.

Dave: If you find a link to that, I'll post it on the website. I have a-

TS: Oh, sure.

Dave: Okay, I would love to read it and share it with listeners. Now, I want to tell a little story. When I'd read your books, and I first met you at the American Academy of Anti-Aging Medicine somewhere around 2001. Actually, the first time I'd ever gone. I had just started an anti-aging non-profit group in the Bay area, and this was somewhere in the Bay area. I went and said, "All right. I'm going to get to meet you." I'm walking around, there's all these superstars of anti-aging that's no one's heard of. I'm in line at your booth-

TS: No one's heard of. That was the best part. That no one's heard of.

Dave: Well, no. At the time, 20 years ago, anti-aging people were wacky. If you were to say I'm into anti-aging, people thought you were completely just crazy. Now, we're like actually there's billions of dollars of research, we're going to work on this. At least, it's socially acceptable to be willing to live longer. At the time, there's a gynecologist in line in front of me to talk to you. She says, "Oh, I'm on your protocol, TS, and I feel so good on this and it totally works." You go "Oh, great. You're using it with your patients?" She goes, "Oh, no. I can't use it with my patients." Blah, blah, blah. It's too complex and regulatory and fear and all this. It was one of those first experiences with me that showed me wait, doctors sometimes know stuff but they won't do it with their patients because they're afraid of losing their license. You were a little pissed to be honest, and you were like what the hell? Seriously? How's that even ethical? I actually agree with your point back then.

TS: Yes, I am very clear that I expect the doctors to step up, and if they want my help or they want to be able to call me and ask a question ... I think I told her to get out of line and let somebody come who had a real question. Okay? If she wasn't going to help anybody else, I wasn't going to help her. It was just like that.

Dave: It's one of those situations where sometimes physicians, the good ones at least, I think are willing to experiment on themselves. Some of my very favorite doctors are like I won't do anything on a patient I haven't done on myself, other than surgery because you're not going to do that on yourself. If it's an anti-aging restorative regenerative therapy, they're like, "You know, I think I should experience and look at the side effects and the felt sense of it." I respect the heck out of that. I'm hopeful that there's been a big shift in the last 20 years. There's still mainstream medicine, but there is now focus groups of doctors who are willing to go outside the box, with some personal risk to do it. Tell me about the Wiley Protocol that worked for this gynecologist, and what did you do different when you develop the Wiley Protocol?

There's lots of women listening, and if you're listening and you're taking birth control pills, you need to not take birth control pills. They are simply bad for you. TS Wiley is the first person who I think brought that message out. You were in Suzanne Somers's book.

TS: Yeah, I was under the radar and very happy where I was until Suzanne put me in all these books. Then, I ended up in front of the Senate. The reality is I had a hot flash and I didn't like it. My youngest daughter was three. She's 26 now. I thought what the hell was that? That's crazy. Preceding that for about three or four months, I remember being in bed with my husband and thinking this would be what it's like if I had a brother,

because I don't have a brother. What the hell happened to my libido? I have a raging libido, and it was just gone one day. I thought I need hormones. I got to figure this out. I read everything I could and nothing made sense, and I basically went to the notion that if you were going to put back something that you've lost, like insulin in a Type 1 diabetic, you would want to put it back the way you had it.

Type 1 Diabetics, of course, take insulin depending on their blood sugar after they eat, whatever they eat. They measure it all the time because that's the best they can do to replicate how the body would respond. I went to gynecology books, and I went to all these books that showed a woman's rhythm in a healthy 20 year old woman. Now, that was just estrogen and progesterone. I knew it needed to be transdermal, because anything you swallow is always whacked out in your liver and it becomes other things. You swallow progesterone, it hits GABA, you go to sleep. That's not what progesterone's for. You don't eat hormones in life. I can tell you the hormone I think of most is melatonin, and melatonin only happens in stone fruits in July, because the days are really long, and that's how you get a little bit more melatonin. That's kind of interesting.

In general, sex hormones, steroids, even peptides, you don't eat it. I knew I wanted it to be transdermal. I knew I had to figure out a dosing schedule. I found something that was 20:1. One milligram of estrogen to 20 milligrams of progesterone. I figured out how every three days, every 72 hours, there's a receptor roll over, steroid receptor rollover. Every 72 hours, you make new ones. I changed the dose every three days. You build it and they will come. I made the tipping points. I made day 12. Lots of things happen on day 12. Day 12 makes you a progesterone receptor. Day 12 spikes LH so you would ovulate, if you were young. Day 12 hits G1 arrest, everything stops growing in the lining of your uterus, your breasts. Your breasts have the same sort of schedule of growth and death, apoptosis and fulmination as your uterus. It's by the moon. The light of the moon, okay, governed that cycle until we turned on lights inside, until we forgot about all that.

That's why I take them to a plantarium. I had a model. I'm going to be 20 again inside. I'm going to put it in on my skin and hope it absorbs. It took a while to get a formula that absorbs right. Then, I figured out dosing should be as it is in the body 20:1, and progesterone doesn't even start until day 14. The progesterone that you get, hydroxy progesterone, is from your adrenals day one to 14. That's different. Then I had to put it in something. Hormones in those days came in tubes, and you got a spoon. Or, a jar. Our favorite little guy, what's his name? Uzzi Reiss. Our favorite little guy, Uzzi Reiss, would give people a jar and say you put on what you want when you feel bad. That's not science. I made a very strict dosing schedule. Very strict delivery method. I ended up putting them in 3 ML syringes because you could go one line at a time for one milligram, or for 20 milligrams.

I colored coded it because old ladies are tired at night, and you don't want to grab the wrong color. Then, I got a third party tester called Dynalabs. All the pharmacies that would sign up to make this, and want to use my name thanks to Suzanne, would pay to have their stuff tested and it would be reported back to me. I had one of my kids checking with Dynalabs in St. Louis. When some pharmacy came back with bad results, we would make them retrain with Dynalabs to learn how to make hormones again. It's

only a one two three project. Really, everything I do is one two three because people can't really absorb much more than that. That's how I did it. I mimicked nature. It's called bio-mimetic bio-identical hormone replacement. I did the same thing for men.

Dave: One of the things that was especially surprising 20 years ago, but I think most people listening haven't heard about this, you talk about doses of hormones to mimic about what a 20 year old woman's hormones would be. That means that perimenopausal and menopausal women can reestablish regular periods? Is that a good thing? Is that the way you want it to work?

TS: Well, let's start with two really easy assumptions. 20 year old women don't have Alzheimer's, osteoporosis, heart disease, cancer, MS. We want to be there. We don't want to be where we are. That's my favorite thing. You go in for a blood test, and you're 35, 40 and they'll go your blood test is normal and it's just in the toilet. That is normal for 35 or 40. Not helpful, but normal because you're dying. The question about having a period, young healthy women have three states to be in. They can be pregnant, they can be breastfeeding or they can be menstruating. Now, I could not recreate pregnancy and breastfeeding. Don't think I didn't try, but I could put cycles back, and I could put cycles back normally so they'd have a five day bleed. They felt good, so we got blood work on day 12 that was the same as somebody 20 years old.

That was the other thing. They could go to their doctor and justify what we'd done. We had a potential to alter the dose because everybody's different. You could go up a line or down a line. I thought it was a pretty good plan, and when you ask about a period, you have choices as a woman. You can have a period or you can have a walker. You can have a period or you can have chemotherapy.

Dave: Tell us what you really think.

TS: Yeah, well sorry.

Dave: No, this is great.

TS: Transparency is my only gift, okay? You can have a period or you can have a white cane. Or, you can have a period or ... Don't you want to jump out of bed every morning, know where you are, know where your keys are, and not hurt anywhere. You shouldn't know you have a body from the neck down unless you're having sex or exercising. It shouldn't hurt anywhere. Nothing should be bad, right?

Dave: You're in your mid-60s. Do you still experience that level of energy at all?

TS: Yeah, well, we're talking. Do I sound tired?

Dave: No, not at all. It's working for you is what I'm asking.

TS: I think it was after I died and came back I had more energy. Yeah, I do but I'm no more hormones than a transsexual. You have to understand I have a thyroid protocol, which is

an inverse curve to the estrogen. I have an HGH dosing protocol for men that you can use a Novo Nordisk pop click for. Men need growth hormones so much. Women, not so much. Women make growth hormone in their liver if they have enough estrogen. Men run out at about 29 and it's just fumes past that point and gets worse. It's part of prostate cancer. I have at my disposal 58 or 60 pharmacies that compound. When I create an idea or a drug, and again, I'm the crash test dummy, and of one this study, I will say I need you to make me this, and then I will go to one of my doctors ... We have 520 something doctors who prescribe ... and say would you prescribe this. Sometimes it takes me 10 doctors in to get somebody to go, "All right."

It's like no guts, no glory people. You're going to want this stuff in 10 years. Just let me invent, okay? Most recently it turns out metformin or Glucophage in a cream ... I can show you this because you can see me. See my hands?

Dave: Yeah. They don't look 65.

TS: Yeah. We call it the slippery slide of the slope to 70. No they don't, and neither does the rest of me thank you very much. Metformin cream did this. It de-pigments, it grows fat. It does all sorts of things. It's a way for people who can't swallow Glucophage or metformin without being nauseous to use it. There's all kinds of stuff. There's Rapamune. The work I've done with Rapamune, I think, is terribly exciting. Rapamycin. Do you know what that is?

Dave: Oh, yeah. We've talked about it on this show, and I've talked about suppressing Rapamycin in fact in my books. This is a way to cause you to build muscle, but if you have it all the time you might get cancer. You need to modulate that, at least as far as I understand it. The cycle thing.

TS: Yeah, you're right. There should be a cycle. That's always true, but I don't know what kind of cycle you came up with. I might have to read your book. I looked at it because I have a granddaughter who is on the autism spectrum. That tends to be tubular sclerosis or Fragile X or something. mTOR pathways, mammalian target of Rapamycin is involved. It's a whole other immune system no one knew existed until this guy in the 70s, who worked for Pfizer. When they closed down the plant in Ohio, and they closed down the experimental medicine part, he had frozen dirt from Easter Island in the refrigerator. He said he just couldn't leave it. He thought it was important. He took it home and put it in his refrigerator. He's the man responsible for everybody walking around with a kidney transplant that didn't fall out. He made it work.

Now, unfortunately with kidney transplants or even heart-lung transplants, they give it with three other immunosuppressants. The stuff you read about Rapamycin is usually tangled in with taking way too many immunosuppressants. Rapamycin on its own in about two milligrams won't give you anything but a yeast infection or a herpes blister. It's really not that intense, but will it buy you life? In dog studies and mammal studies, they're seeing 25% longer life. I don't know. That's not why I take it, and that's not why I went out to get it. It also, in cardiac studies, rebuilds cardiomyopathy and somehow ... Nobody knows how ... takes away left ventricular hypertrophy. That big lump that grows on the side of your heart when your high blood pressure's not controlled forever? It

brings it down. It does remarkable things, and they're not going to know it if they keep trying to scare people.

Dave: You can, I think, think that herpes virus, they change your parietal lobe. Very few human beings think about things the way you do, and have that knowledge that you just effortlessly pulled out. I have an also cross-correlating brain but not to the extent that you do. Everyone listening-

TS: That's because you're a guy. It's just because you're a guy. It's okay.

Dave: I also had a whole bunch of Asperger's symptoms when I was a kid. I have a strange brain, too, but I just want everyone listening ... That long list? Everyone of those things deserves a building at a research facility to understand how we're going to live past 180. This knowledge, it actually exists. It is known, and it is used by billionaires. I know because I've met some of them. This stuff is out there and I'm doing a huge amount of stuff like that, and I'm actually starting to put some stuff together to make it a little bit more accessible. Hopefully that just blew your mind, but there's a whole universe of this stuff. TS Wiley has been in swimming in that universe in a way that most people don't swim in 17 different pools at the same time. That's why you're on this show, and thank you for just that long list. Now, I got to ask you about-

TS: For not dying yet.

Dave: Yeah, thanks for not dying. Talk to me about metformin. Metformin is a very common anti-diabetes drug, and it's also been used for anti-aging or quite a while. I took it for about three years when the first research came out about life extension and Glucophage. I ended up not taking it. In fact, one of the-

TS: Why?

Dave: Well, I looked at the decline in mitochondrial function. About a 30% decline from it, and resistance of Vitamin B12 that come from taking it at least orally. I decided you know, I can mimic the effect with there's some herbal stuff called AMPK, is it [inaudible 00:39:21]. I said you know, I can get the AMPK signaling from this stuff similar effects without the suppression of mitochondrial function.

TS: I want you to think about what you just said. If you have my work there, and I think you do, I presented a paper on mitochondrial function and hormone response. Of course, in the cells that make hormones, if your mitochondria are dying, you're not going to make hormones. If you put hormones back, then the mitochondria will make you more hormones. It's a circle. It's one of those things.

Dave: This is what's so irritating. Everything is a system and you get these researchers who are like I'm going to isolate all these variables, and they isolate 10 variables they thought about, and there's 100,000 other ones they didn't think about they didn't isolate. Yeah, I've seen no data that says if you have adequate hormones and Glucophage that it does the same thing.

TS: Well, I would tell you Glucophage is French white lilac bark. It's not a drug. Being French white lilac bark, it's a salicylate like an aspirin so there's immuno- Well, let's say antiinflammatory potential. I think 10 years ago, the American College of Nephrology came out and said everybody over 40 should take Glucophage to prevent kidney failure in old age.

Dave: Interesting.

TS: I told all my doctors 10 years ago, and a lot of them decided to use it. The oncologist that I work with is most interesting. She is being watched. She works in a clinic. I have made fun of poor Julie Taguchi forever. I used to tell her she drove around in a truck with a big spider on top. She was just a poisonous person. Well, I met her by accident. I treated one of her patients by accident. Bent Formby, when he was alive, his wife had a friend whose husband was dying. Ben said do you think progesterone will help him, and I said well, no, I think it should be testosterone. I have lots of progesterone around here because I used to get a prescription and fax it to pharmacies and pick it up. Then, I'd still have the original so it could go on for a while. Too many pharmacies. I once told women to do that, and they pulled me off the stage.

Anyway, I had a lot of progesterone. I gave it to Bent, and this man who had lung tumors that had metastasized from a bladder cancer, all the tumors went away. I said we have to see how this man's doing. I didn't know that at that point. Every time I'd try to call Taguchi, Bent would put his wrists together like we were going to be handcuffed. Not brave enough for me. I called Taguchi and I said I want to tell you what I've been giving your patient, and then I want an x-ray. I met her in the doctor's lounge in Cottage Hospital in Santa Barbara. She said, "What are you talking about?" I talked very fast, told her everything I knew, and she said, "You know hormones are not okay for cancer patients." I said it depends on how much you give them, and what kind you give them and when you give them.

Dave: Yeah, that would make sense.

TS: Yeah, I think you're mistaking. You wipe them all out because you don't know how to do it. I know how to do it. Can we have an x-ray? We got an x-ray and all of his tumors were gone. She said, "Now you've got my attention." I've been working with Taguchi for at least 15 years, and every once in a while, I'd like to see a stronger spine but she comes through. She's courageous enough, and with her patients she started using metformin because insurance companies won't pay for Glucophage, and the difference between metformin and Glucophage is a binder. It's cellulous so you don't throw up. Once it hits your blood sugar, if you've never had low blood sugar, you throw up and you probably didn't feel good on it.

Dave: Oh, I felt fine on it. I was used to-

TS: It didn't bother you. You were just worried about what you read?

Dave: Well, I weighed 300 pounds. I've had lots of blood sugar swings, and I have ketones present all the time from Brain Octane so low blood sugar doesn't usually get me unless it's a very short term toxin induced thing, where like it crashes. I never felt bad or good on it. I can't tell when I take it, which is interesting.

TS: Well, 850 three times a day and you'd notice. All I'm suggesting is-

Dave: Okay.

TS: Yeah, yeah. That's about the right dose for somebody who used to weigh 300 pounds. She used it on her cancer patients because I gave her the information and the studies, which you aren't going to have on why it would stop the inflammation of a tumor, why it would change blood sugar which feeds tumors, why you would want to do this. She has jumped on the bandwagon for rapoimmune. There's a drug called Afinitor that they sell to gynecologists which is just Rapamycin. Rapamycin is out of the dirt on Easter Island. It's a macrolide antibacterial, antifungal. It's the strongest immunosuppressant anybody's ever found, but they had to find it to find the pathway it worked on which became mammalian target of Rapamycin, or mTOR. Whether we're talking about autism, I mean you have a paper that I published on autism, which was using something called hydroxyzine or Atarax. It's a very common antihistamine. They used it for cutaneous things like hives and they use it in dental offices to calm down kids.

I thought if we made it in a cream, my three year old granddaughter who never said a word might talk. Well, I had to convince my daughter, who thinks I'm just mom. They all think I'm just mom, and I made it up. I made some, and within six weeks she was talking. She's only one year behind. Well, you got to think about what it works on. It's an antihistamine, so there's antiinflammatory effects in the brain, and it was the original Valium. It's an anti-anxiolytic so you're calming down. If you need to talk and you can't, and you're freaking out, you're anxious. I thought it couldn't hurt her either way, and it seems to work.

Dave: There's no question that autism is either caused by, or heavily influenced by, inflammation in the brain. Whether it's autoimmune, environmental, it's actually multifactorial. Many things can contribute, but that's why the whole community ever since we have identified autism has been "What's the cause?" There is no one cause. It's a systems cause, but that's the way it's manifesting.

TS: There's never a one cause.

Dave: If you turn down the inflammation in the brain, of course it's going to get better. I can tell you if I let my brain get inflamed by not controlling my environment, I act very differently than I do today because I'm who I am because I monitor that inflammation. I don't know how to function if I don't.

TS: Well, the biggest thing I think that happened that led her to being able to speak, and even beginning, it was snippets from cartoons. "Help, help. Help to get the chicken." Whatever. That meant she needed help. That went on for about six, eight months and

then she started to put together real sentences. Then, it took a year or two before we're having a conversation. I ask a question, I get an answer back. Now, she's just really funny. Maura looked at her and said, "You read that animal book six times. Are you really reading it or just looking at the pictures?" She said, "I'm really reading it." She's nine now. Maura said, "Well, what's that say about that?" She explained it in great detail. Maura said, "What's an android?" Wiley, her names Wiley Ryan McGinnis. Wiley said, "It's AI, mom. Are you stupid?" An android.

Her social skills could be better, but she's a lot like me so so could mine. I said to Maura I can get her to talk, but I don't think you're going to like what comes out because she's been listening for three years to you worry about her being retarded. That soaks in.

Dave: It does.

TS: It's taken a while to build up social relationships with her. She's brilliant. What we can do to make sure other people know that. She went to sleep. That was the point. If you take Atarax twice a day, you're wide awake in the daytime, which most autistic kids aren't because they're almost a fugue state because they've been awake all night. This, they take it at night and they sleep and then they're better off in the daytime.

Dave: Incredible.

TS: They can learn.

Dave: I'm going to do some more research on this for sure.

TS: Well, read the paper. There's references in the back. There's always references in the back.

Dave: I was going to say I've never seen anything you do that isn't just incredibly stacked with references. I put a lot of references in the stuff I do, but I am truly blown away. You must have the world's biggest Mendeley database on earth.

TS: Actually, it's 21,000 papers that have been OCR'ed. We'll have search words soon, and we'll put it up for the doctors, that are just what I used for Lights Out and Sex, Lies and Menopause.

Dave: I absolutely believe that having read them. Tell me a little bit about prostate cancer.

TS: You know the real story of A4M, right? Where A4M came from?

Dave: Probably.

TS: Klatz and Goldman.

Dave: Was it Klatz and Goldman? Weren't they like [Dirken Sandy 00:49:19] supporters or something?

TS: A man name Joe Weider, bodybuilder.

Dave: Yeah, I know of Joe.

TS: Joe Weider and his HGH and his anabolic steroids and his whatever, Joe Weider sold his Rolodex in those days, his company. That became the magazine, Life Extension. You remember Life Extension started as a magazine before it sold blood tests, before it sold all kinds of supplements. There you go. Oh, that poor man. He was just destroyed by his doctors. I met Ben through David Duchovny, and Ben had prostate cancer. It wasn't even the kind that was going to kill you. There's lot of cancer. Most cancer won't kill you. People panic, and their doctors give them the advice to be gutted like a fish, and if you watch the Rag Papers, US Weekly, you'll notice shortly after his health crisis, he ended up divorced because it destroys you as a man.

You dribble, dangle and die. You're depressed forever. I worked with a urologist for many years on the men's protocol and on understanding men's health because as an anthropologist, you're supposed to be dead, right? Dave, I'm sorry. Men get into the job and get out. Women and children are a process on the planet, so when men hang around too long, when they don't kill each other or they're not eaten by an animal, they're competing for the food supply with the offspring. You should be dead. For you to hang around is parasitic. Sorry about that. It's not that I don't have a husband. I have a husband I love, and two sons and three grandsons.

Dave: I can own being a parasite. I eat my kids' food all the time. It makes them so mad.

TS: Yeah, that makes you a bigger man that you can own being a parasite. I don't think anyone's ever said that to me. They usually just panic and turn off the button. At any rate, anthropologically, men are ephemeral. They're like mayflies. They're gone. In this world, they malingering because we give them a heart stent. Most of them don't have prostate cancer. Prostate cancer doesn't really hit you hard until after 60. Prostate cancer is like breast cancer. A prostate is a breast. It has duct work and it makes food. It makes prostatic fluid, which gives the sperm a high glucose product to go out and do the job. Three days, do the job and get out. Like breast cancer, there are many forms of corroded pipes. There's many forms of expansion BPH, but it won't kill you.

Once they start doing biopsies, and punching holes in men, just like a scar on your hand closes, the skin closes. The stem cells in your skin create closure. Once you punch a hole in your prostate, if you've got a nest of stem cells that were wacky, you just woke them up for wound healing, and that's why people die much faster after biopsy. Biopsy follows PSA and it's a disastrous and it's terribly sad, and it happens to men if nobody's watching.

Dave: I have two more big questions for you before we get to the end of the interview. One is I'm a guy, and I had zero thyroid. Not zero, but near zero. Very, very low thyroid and very, very low testosterone. Lower than my mom when I was 25, 26. I've been on testosterone replacement and bioidentical stuff in various forms ever since. I took three years off when I was doing the Bulletproof diet research just to see what the impact,

and I found if I was really careful, I could get it up to about 750 without supplementing, but that the supplementing really helped. What should guys do? Tell me about guys who are 38, guys who are 48, guys who are 100. What does the Wiley protocol do that's different then, "Hey, take some thyroid. Take some testosterone."?

TS: Well, first of all, the Wiley protocol was testosterone and DHEA separately because DHEA makes androgen receptors faster. Then, when you use the testosterone, you don't wait six weeks to feel it. You feel it in six days. It's a dual therapy of testosterone and DHEA. I believe men, knowing your expiration date is something like 35, 40, at about 29 should use growth hormone, but you should use it in a rhythm. The rhythm I came up with for growth hormone is based on the fact that growth hormone receptors are made by estrogen. In men, testosterone has to convert to estrogen to make a growth hormone. We had to count the days and we had to figure out how you'd throw that in. Men need growth hormone. They need testosterone, DHEA. Most men just stay un-inflamed because as I said there's two immune systems. There's the one in your gut that is defense, that keeps their cousins out.

That keeps you from a getting a cold. Then, there's the one that belongs to the planet, also, unfortunately in your gut and in every plant and everything, and that's autoimmunity. That's what takes you out. Men, to be taken out, whether it's heart disease, which is commonly known in men or it's prostate cancer, or it's lung cancer should they have decided to smoke for no good reason. Everything is inflammation. High blood pressure is in fact inflammation in men. I would tell you Glucophage, metformin, those things are all good immunosuppressants. If you can get your hands on it, Rapamycin's better. Rapamune. No more than two milligrams ever.

Dave: Would you combine them?

TS: I would take all of that. Okay, let's do it this way. Why don't you ask me what I take?

Dave: All right, yes.

TS: I've never told anybody.

Dave: Tell me what you take.

TS: I have never told anybody.

Dave: Okay, this is ground breaking.

TS: If on the way to 70, I'm not that hard to look at and I have enough energy, you probably want to know what I take. I take a lot of antihistamines, different kinds. I take a lot of hormones and a lot of hormone suppressors. I take the Wiley protocol. Needless to say, I take a dose that is probably an average high dose. I take plus four lines three times a day. That's called Triple X because I thought I was funny. I take thyroid, my own thyroid, which is a transdermal inverse curve to estrogen that has a seasonal dosing. The men's protocol is seasonal, okay? Estrogen receptors don't change seasonally, but thyroid

which makes an estrogen receptor ... or an androgen receptor. We found that in your case ... changes seasonally.

You have to change the thyroid seasonally. That comes [inaudible 00:57:06]. That way it's prepackaged and it's mindless, and your pharmacy just has to make it. The pharmacies are listed on my website that make all of these things. I use thyroid. I use spironolactone or aldactone. Whatever you want to call it, it's peppermint. Always was peppermint. You can drink peppermint tea I suppose, but it suppresses aldosterone. In old ladies, if you can't get your estrogen right, what makes you grow chin whiskers, [inaudible 00:57:35] and slightly bald, and your voice gets deeper, is aldosterone. In men, aldosterone knocks out your hairs in your ears. Old men get deaf, and old women get blind because they need the estrogen. I take spironolactone, estrogen and progesterone, thyroid. I take a little DHEA because now I'm over 65. My adrenals have to be a memory because they measure sun's up, sun's down and it's been 65 years. That's what adrenals do.

Dave: Are you using 7-Keto DHEA or regular DHEA?

TS: Regular. I made a cream for men, and I use a couple of lines of that. It's like 20 milligrams in a cream. I use it in the rhythm of the androgens. I have a testosterone rhythm for women that goes straight across, makes a big bump in the middle because in young women, your testosterone surges. When your LH pours the [inaudible 00:58:36] cells make your testosterone is the egg. Otherwise, men seem tedious. Your libido can be controlled by that bump. You want things, and you sit around and talk about your last kill. Did you know a new study just came out, and 80% of the food supply in a group comes from women not men? Of that 80%, 70% of the 80% comes from grandmothers.

Dave: Interesting.

TS: They go hunting, okay? That's how it works. The mother hunts until she has two children, and then grandma takes over. First child, she's still hunting because she can tie them on her back. You guys are just ground zero for what can we take off the planet that's using up energy and not putting enough back. If you want to avoid that, you're going to immunosuppress. You're going to take your hormones. You got to fucking sleep somehow. I don't know. Melatonin. I take melatonin before I go to bed. I take seasonal melatonin that, of course, I invented. It's in a cream. It's transdermal, which you don't get very often. When you put it under your tongue, or you chew it, anytime you swallow it, it's going to go through your liver and it changes it.

More importantly, it's a bolus and you want this to last you most of the night, because melatonin blocks estrogen receptors in the beginning of the night so they pop back up and you can stay asleep all night if you're a man or a woman.

Dave: I'm going to ask you an unusual question. Why aren't you using it rectally instead of transdermally? Doesn't it absorb better without all the side effects?

TS: Too fast.

Dave: Too fast?

TS: Yeah, there's no side effects transdermally. What you want is a depot. It could be a tricep. I don't tell people to put things on their legs because each fat pad has a different hormone production of its own and response. Anytime you put something in a mucus membrane, whether it's up your nose ... Then, there was testosterone up your nose until they took it off the market. Or, you're saying rectal. You can supposit anything you want to, but the problem is it's a bolus and your body doesn't know that. Your body knows slow rhythms. Beat, beat, beat, beat, beat. You have to enough fat depot where every time your heart beats, the capillaries pick them up and take it.

If you open a door and there's a monster, and your heart goes nuts, you get more hormones really fast. That's the system.

Dave: I changed the way I do my testosterone. I used a cream for a long time, and creams are annoying because if you're a guy and have hairy armpits, you get a greasy thing. They absorb on the scrotum or the armpits really well, and also, I have young kids. I didn't want to get testosterone residue on my kids from sheets or from things like that. I thought about it and I swapped, but I feel like the cream did work better. How do you keep your hormones from getting on other people?

TS: I have five grandchildren, and I certainly have a son-in-law and my daughter, and you're talking about a contact high. Women complained in the beginning that their dogs would get a contact high. Dogs, who had been neutered, were suddenly producing breast milk and strange things. I said to these women where in the hell are these dogs? Between your legs? Where do you sleep with this dog? A dog should be over there, not in bed with you. These were old ladies with little purse dogs in bed with them. I think it's pheromones more than a contact high. I believe in the work [Evan Cotter 01:02:26] did at the University of Chicago years and years ago about taking a pad, rubbing it under the armpit and then under the nose of the women next door. These were women, and they all cycled together.

Dave: Pheromones are real.

TS: Yeah, that's a pheromonal thing, okay? The Wiley protocol for men, the DHEA goes right above your kidneys in the back. The dose. The testosterone goes right on your femoral artery. Yes, of course, it's going to get on your scrotum. That's a bonus, and a little on your thigh. That's where that goes, and we don't see a lot of testosterone ... We check. I have 528 doctors, and people are supposed to report adverse events, let alone serious adverse events like somebody got cancer or somebody dropped dead. We've kept track of that stuff for 20 years. You could use that. You're in a T-shirt. I suppose that can cover your back a little bit, but you don't have to sleep naked. You could put some clothes on and it wouldn't hurt them. I'm not sure you sleep with the children?

Dave: No, no.

TS: Oh my God. We had one that wouldn't get out of bed til she was seven. We'd go, "Would you go? Would you go now?" My husband, who was a mensch, said she's going to stop nursing someday. I said yeah, someday. We'll figure it. She'll find a food she likes. I had all my children at home.

Dave: So did we.

TS: Yeah, did that kind of thing and then we slept with all of them. Nobody got shots. My daughter, in fact, the one we're talking about is now 40. She has to go to the dentist tomorrow and she's never been to a dentist. She said, "Would you go with me? I'm scared." I said oh my God, you're 40 years old. She said, "I never went to dentists. My teeth were perfect." I said, "Yeah, I know they were." It's from having babies. She has five now. You don't have to worry about a contact high. Hormones absorb in 40 minutes. You could take a shower, you could go to bed, but exercise, you could sweat them back out for two hours. If you put them on, and then immediately exercise, you'll sweat them back out.

Dave: That's good to know. All right, next up, and we're short on time so I just want to talk about sleep sugar and survival, and Lights Out and your work there. It was really groundbreaking, and last year I got to go to Satchin Panda's lab at the Salk Institute and look at rat mitochondria in the eyes, the melanotropin sensors. This was such a big thing. Because of your book, I started experimenting with blacking out my room. Taping over LEDs and all these things. I measured a difference in my sleep. I ended up starting a company that makes patented glasses that are four layers of spectral filters that block every spectrum of light that signals to your SCN that it's daytime.

When I use my aura ring right here, I find I can double my deep sleep when I use the glasses before bed for a while.

TS: The contract is coming for my cut of the glasses, right?

Dave: Exactly.

TS: No, not really. Okay, just thought I'd ask. It's always worth a try. Yes, I said in Lights Out please wear pink or red sunglasses because spectrum changes, there is a famous man named Ott, O-T-T, and he did very good work on spectrum changes back in the 70s. It turns out that black to pink to blue, so it's nighttime and then its dawn and then it's daytime, changes your cortisol reception. The same way blue to pink to black changes your cortisol reception and gets you ready for bed. Turns it all off. If you're not going to go to bed when it turns pink, and most people are not, your glasses should be worn at that point. All your computers, electronics, if you can't turn them off, and I question whether you can't turn them off, should have blue light filters on them that are on timers that turn on whenever sunset is.

That's why when you're out in your car and you're driving, and the sun's going down, you start yawning and you can't figure out why. That's the window for going to sleep.

Dave: I've noticed I am a night owl. I always have been. I've noticed that if I stay up, especially if I'm writing books. I just like that quiet time, and I do it in a spectrally compliant environment. It looks like a submarine or a hooker's den where I'm writing because it's only red. My monitors are red, but if I see a little bit of sunrise even before the sun comes up, I can't sleep. As long as I keep it dark, I go to sleep and I sleep. I go through cycles and it seems to work for me, although who knows, maybe-

TS: You could have said dark room instead of hooker's den. I'm just saying.

Dave: Everyone tells me I have red lights everywhere. They're like, "Dave, it's a red light district. Come on, man."

TS: Remember the old dark rooms? Just the red lights when you did your own film?

Dave: Yeah, but almost no one listening remembers that. I know my dad might have had a darkroom. I saw a darkroom, but we all have digital cameras now.

TS: My husband had a darkroom. He loved developing pictures. It was like magic.

Dave: It's a lost art.

TS: Well, a lot of magic is gone.

Dave: I have one more question for you, TS. If someone came to you tomorrow, and you didn't know much about them, and they said I want to perform better at everything I do as a human being. What are your three most important pieces of advice for me? What would you offer them?

TS: Get up at dawn. You have to get up when the sun comes. That will immediately change not only the bacteria in your gut, you want to hack them. You get up at dawn, you walk 10 minutes watching the sun come up, and you've changed cortisol and a multiple of hormones and bacteria for the whole day. You need to go to bed about two hours after dark, even in the winter when it's dark at 5:00. I'm sorry. You eat an early dinner, go lay down. I used to tell people to read Lights Out. Your eyes going back and forth, I can put anybody to sleep. It's hypnotism to read a book. You have to hormones, you have to have sleep and you have to have physical contact. You have to have love. Those old ladies who slept with their dogs were missing something they wanted. Without a physical relationship, without sleeping with something alive, and I don't mean your turtle, all of your body doesn't do what it's supposed to do.

Human beings never slept alone. They slept in piles. They slept in tents. They slept with children. I would tell anybody, of course, have children if you're not too old. If you're too old, and you want to be like my friend Madonna, you can adopt some. She's a good grandma. She's doing fine. You need people and physical contact, and to respect the light and respect the hormones. You'll feel so much better no matter what's wrong with you. That was my first question in Lights Out, because I knew about the carbohydrates and I figured out prolactin and how it affected brooding. My first question was I grew up

on a farm, and all those 97 year old farmers lived on pie and bacon, which is a gateway meat. Right? Gateway meat. I thought how do they live to 97? Then, I remembered they got up at dawn, and they crawled in bed because they were tired from being on the tractor all day.

Who was it? It was Delgado. Delgado said I like to exercise. I take my shirt off and I go outside and lift weights. I said, "Dude, way too much information. Nobody wants to see you with your shirt off." He looked at me, and I said if you want to exercise, go build a boat. He said, "What do you mean?" I said build a boat. I said, "I don't care if you ever get in it. Give it to somebody, but your work must have purpose." The purpose is not your muscle physique. The purpose is doing something for somebody else. I would tell them purpose is very important.

Dave: Purpose. Beautiful. Well, TS Wiley, thank you for your unusual brain and your amazing work over the years. I think you've consistently been ahead of your time, and I'm happy that you're not dead.

TS: Me, too. Me, too. I think Mercola is going to be a little down. I don't know why he made that up. I saw him, too.

Dave: People make mistakes, or whatever, but I'll make sure he knows you're alive.

TS: Can we call it wishful thinking? It's not quite a mistake.

Dave: People can find your work at [TheWileyProtocol.Com](http://TheWileyProtocol.Com). That's W-I-L-E-Y. We'll link to it in the show notes and on the blog. Thanks for being on the show.

TS: I had a wonderful time. You're a lovely man, and you're doing good work. I'm impressed. I looked at all your stuff that you're hustling. Most of it won't kill anybody and it does some good. That's pretty remarkable. That's about as good as it gets for me. That's pretty remarkable.

Dave: I appreciate that. Those are definitely standards I live by. Thank you.