



Essential Alchemy

The Ancient Art of Healing Naturally

Season 1, Episode 11: Biology Behind Premature Aging with Tom O'Bryan, DC, CCN, DACBN

Jodi: Hi, it's Jodi Cohen. And I'm really quite honored to have with me, Dr. Tom O'Bryan, who is considered a Sherlock Holmes for chronic disease, and teaches that recognizing and addressing underlying mechanisms that activate the immune system, is the map to the highway towards better health.

He holds teaching Faculty positions at the Institute for Functional Medicine and the National University of Health Sciences, where he's trained and certified tens of thousands of practitioners around the world. He also wrote one of my favorite books, which I think is brilliant, *The Autoimmune Fix*. And I'm really excited to talk a little bit about the parasympathetic nervous system and autoimmunity. So welcome, Dr. Tom.

Dr. Tom: Oh, thank you, Jodi. It's really a pleasure to be with you. Thank you.

Jodi: Thank you. So I'm just going to jump right in. Can you talk a little bit about your perspective on the parasympathetic nervous system and autoimmunity?

Dr. Tom: You bet. And this comes from, I guess it's the godfather of stress, that was Dr. Hans Selye, and he coined the word "stress" in terms of human health back in the late forties and early fifties. And he taught us back then, and it's something that most of us haven't heard and I think it's an important understanding because then it makes sense. In the introduction you said that one of my goals is making it easy to do the right thing. Well, what you have to understand, the map as to how you got to where you are, if you want to go back to health, you can't go back. If you don't have a map, well, "I'll take some vitamin C." Well, that's going to help a little bit. "Well, I'll take a multiple vitamin." "Well, I'll do keto." Well, that's going to help a little bit, but it's not going to get you where you want to go, unless you understand this dynamic. So, this'll take a few minutes, but I believe it's really worth understanding the dynamic.

We have two separate nervous systems. Our parasympathetic nervous system and the sympathetic nervous system. The parasympathetic nervous system is the nervous system that's in operation for most people. The 11th day of a two week vacation. You've not yet started thinking about going home, right? And you're just relaxed, and you're in the mountains, or you're on a beach with your family, and your body is calmed down from the stress of everyday life.

Dr. Tom: And it really is the 10th day or the 11th day of a two week vacation where your heart rate is slower than what it usually is. Your breathing is slower and deeper than it usually is. Your muscles are more relaxed than they usually are. Your digestion is really good. Bowel movements are better than they've been in a while. And you daydream, you wake up in the morning, and you sit with a cup of coffee, and just thinking about bigger pictures of life, your life, your family's life. Some new ideas may come. You're more in a creative state. It's the parasympathetic nervous system.

The other nervous system is called the sympathetic nervous system. That's the fight, flight, or fright nervous system. That's when you have to do to save your life. And think about if an animal is threatened, any mammal, the human mammal is a mammal. If you feel threatened, one of the things that happens is that your heart rate is fast, respiration is short and fast, lots of blood going to your muscles. They're tight, they're poised, they're ready to protect you with whatever you need.

Very little blood goes to digestion, it's not life-threatening that you have to digest. When you're in a life-threatening situation, you don't digest very well. You certainly are not going to go have a bowel movement when you're in the midst of fighting for your life, right? So the peristalsis of your intestines to move things along is much less functional. It's the fight, fright, or flight nervous system. And most of us can't remember the last time we were in a parasympathetic dominant state.

Jodi: So true.

Dr. Tom: You know, with our bodies, you can't, "Oh, I remember. Yeah, that was that two week vacation last year, for a few days, I was really relaxed." Then we're all more in a sympathetic dominant state all the time. Now, and that's our society, and our culture, and the foods that we eat, and things like that. And when you look at the anatomy of our parasympathetic and our sympathetic nervous systems, the sympathetic nervous system, the wiring, the nerves, are really thin. The parasympathetic nervous system, the analogy I use is the parasympathetic is like your thumb. The sympathetic is like your baby finger.

Jodi: Oh, I love that. That's very visual.

Dr. Tom: There's a lot more insulation around the parasympathetic nervous system, it's thicker.

Jodi: Yes.

Dr. Tom: Why? Why would that be? And any anatomist, if you ask them, people that are trained and think about this every day, they'll tell you, they all say the same thing. Ask any electrician, if you're running a current through a wire, almost all the time, the more insulation, the less the wire overheats. So you've got myelin around the parasympathetic nervous system, much more than around the sympathetic nervous system. And any anatomist will tell you the speed of conductivity along a wire, or along a nerve, is determined by the amount of insulation. The more insulation, the slower the speed.

Jodi: Oh, interesting.

Dr. Tom: We have the same bodies as our ancestors, exactly the same. Your ancestors got down to the stream, and they were scooping some water to drink. They hear a growl behind them. They better jump really quick, because the saber tooth tiger is about to launch on them. So you've got to have instantaneous response. You touch something hot with your fingertip, you get it out of there really quick, right?

Jodi: Yes.

Dr. Tom: That's the sympathetic nervous system response to protect you as fast as humanly possible. So you don't want wires that have heavy insulation, that's slowed down the transmission of current. So then you ask an anatomist, "So how often in the human body is a sympathetic nervous system designed to run, and be the dominant nervous system? How often should it be running?" They all said the same thing, between one and 3% of the time, some of them say 5% of the time. Which means the parasympathetic nervous system is supposed to be running 95 to 98% of the time.

Jodi: We have the ratio wrong.

Dr. Tom: We have it completely reversed. So here's the next question. Once you accept that that's basic anatomy, this is the map to your body. And once you understand this basic anatomy and you're running a wire, that's designed one to 3% of the time, 98 to 99% of the time. You can't remember the last time you were in a mellow state, you know, the 10th day of a two week vacation. What happens to the wire that you run 98% of the time, that's designed to run one to 3% of the time? What happens to the wire? It overheats and it burns out. Isn't that language that people use? "I feel burned out."

Dr. Tom: You are burned out. It's called sympathetic depletion. And I mean the telltale signs that these people really need help, you jump up off a sofa or a bed, and you get lightheaded for a second or two. You wear sunglasses outside, even on cloudy days, because you have to squint because the brightness is too much for your eyes. That's because your pupils are wide open, like in a sympathetic dominant state, right?

Jodi: Yes.

Dr. Tom: Your muscles are just all tight and crunched up, and they just can't let go, no matter what you do. We are burned out. And Hans Selye showed us way back in the 1950s. You don't get degenerative diseases until you are in a state of sympathetic depletion. It's sympathetic dominance, to sympathetic fatigue, to sympathetic exhaustion, to sympathetic depletion, and you don't get degenerative diseases until you're in a state of sympathetic depletion.

That's when your immune system can't function very well anymore. It can't protect you. Your ability to get rid of old and damaged cells is compromised. Apoptosis doesn't work very well anymore because you're in a sympathetic depleted state, completely depleted. "Well, I feel burned out." You are burned out. So there were papers published, Selye showed this, when young men who were healthy men, died of trauma, car accident, or a fall, or something, their adrenal glands that sit on top of the kidneys are the size of a walnut. When young men, of the same age, die of degenerative disease, their adrenal glands are the size of a peanut.

Jodi: Oh, wow.

Dr. Tom: That your adrenal glands, the glands that handle the stress of life, are worn out. You're burned out. You burned out your stress response mechanism over the years by foods, by emotional stress, by physical stress, whatever the triggers are, but you burned out your adrenal glands. They don't function very well anymore. Now you're in sympathetic depletion.

Now, depending on your genetic vulnerabilities, you start developing autoimmune mechanisms and degenerative disease. But you have to be in a state of sympathetic depletion for that to occur. That's why way back in the eighties, so many doctors were talking about adrenal depletion, adrenal depletion, adrenal depletion, because the understanding of this concept was coming to fruition. And it's the prerequisite.

You need to understand the map. Doesn't matter what you're dealing with. If you're in a state of adrenal depletion, sympathetic depletion, you're going to have a really hard time getting well. And so that basic understanding is critical. You have to rebuild your adrenal glands.

Dr. Tom: And how do you do that? Two things are important. Stop taxing them so hard. Meaning how we live our lives, the stress of our lives.

And that's easier said than done. And understand the concept, "How do you rebuild adrenal glands that have shriveled to the size of a peanut?" One cell at a time, that's the only way to rebuild healthy, vibrant glandular tissue, is creating an environment for a stronger cell to be produced than the current cell that's there. And create that environment every day. And don't tax that gland so much.

Jodi: Right.

Dr. Tom: That's the only way. So it means that when you understand that principle, you look at it from the biochemical perspective, the structural perspective, the spiritual or emotional perspective, and the electromagnetic perspective. Meaning you get rid of as many assaulting inputs as you can.

Jodi: Right.

Dr. Tom: You have brain fog? Get the alarm clock away from the nightstand next to your head. Put it on the other side of the room. Turn the wireless off at night, nobody needs wireless while they're sleeping. That's just little things you do for the electromagnetic, but there's a whole world of that kind of stuff that's overwhelming to anyone that looks into it, because there's so much to do. That's why the subtitle of my most recent book, is Just 1 Hour a Week to the Best Memory, Productivity, and Sleep You've Ever Had.

Jodi: Right.

Dr. Tom: Because that's the only way to be successful. It is the only way. I would challenge anyone to tell me another way, because it's so overwhelming. There's so much to do. The only way you can do it is baby steps. So every week you allocate Tuesday nights after dinner, Sunday morning after services, whenever it is.

But you tell your family and your spouse, "Every week at this time, I'm allocating an hour to learn more about being healthier for me, and the family." And then you listen to this summit again, one of the talks on the summit, or you read one of my books, or someone else's book, but you allocate an hour a week. For example, when you find out that in my book, that when you store leftover food in plastic storage containers...

Jodi: It leeches.

Dr. Tom: It leaches phthalates into the food. The next day, the chicken has got phthalates in it. And you're eating phthalate-laden chicken right now. Now, there's no evidence that the amount of phthalates that leech into food overnight in a refrigerator is toxic to humans. There's absolutely no evidence of that. And that's very true. And that's how the chemical industry gets away with this crap, putting all these chemicals in our environment, because there's no evidence that the amount of phthalates that leach into the chicken is toxic to humans. Absolutely none.

However, this stuff is accumulative over the years. So give me 25 years of a young woman, who's been putting nail polish on her 20 nails, hands and toes, fingers and toes. And phthalates from nail polish leach into your bloodstream within three to five minutes. But there's no evidence that the amount of phthalates that leach in your bloodstream is toxic to humans, but this stuff accumulates in your body.

Jodi: Right.

Dr. Tom: Now, let's take a woman who gets pregnant, has a healthy pregnancy, hopefully a healthy delivery. But wait, she's got 25 years of phthalates in her body. What does that mean? Well, they did a study of 346 women in Chicago, pregnant women. They collected urine in the eighth month of pregnancy, and they measured for phthalates, and they categorize the results into four categories. The lowest, the next, the third, and the highest. They followed the offspring of these pregnancies, and seven years later, when the kids turned seven years old, they did Wechsler IQ tests on them, the official IQ test.

There's not much in medicine that's all or every, this was every. Every child, whose mother was in the highest quartile of phthalates in urine in pregnancy, compared to the children in the lowest quartile, these kids in the highest quartile, their IQs were 6.7 to 7.4 points lower than the kids in the lowest quartile.

Jodi: So the hypothesis is that the mother had a toxic burden that was passed on to the child that impaired their brain function and their cognitive function.

Dr. Tom: Every child. And then just go to Google and type in phthalates and neurogenesis.

Jodi: Right. And looping that back to the parasympathetic state and what you were saying earlier about sympathetic depletion. You need energy from your adrenals to detoxify and to turn on your immune system. So it's almost like the three little pigs, we're all made of straw when our adrenals are depleted because we have no resilience.

Dr. Tom: That's exactly right. Exactly right. And your immune system is being taxed every day to fight the toxic chemicals that are accumulating in your body. Every day, your immune system is fighting mercury, fighting lead, fighting polysorbate 80. And you cross a threshold. And you can measure this, and you see of the 24 chemicals that you test in a simple blood test, you've got seven of them that are sky high. Meaning your immune system is making antibodies to these chemicals because this stuff is accumulating in your body. And baby gets exposed to all this stuff. Why do you think autism is going through the roof?

Jodi: Right. And then we inject them with neurotoxins the minute they're born, but yeah.

Dr. Tom: Yeah. It's not the vaccinations, the injections. Because if vaccinations caused autism, every child that gets vaccinations would be autistic. That's not the case.

Jodi: Right, it's the perfect storm.

Dr. Tom: Exactly.

Jodi: Their system is already weakened because of the toxic burden that they inherited from their parents.

Dr. Tom: Exactly. It takes them over the edge, over the threshold. And baby in utero, his brain development had been compromised because mom has high phthalates.

Jodi: Right.

Dr. Tom: So baby's brain never develops properly. That baby doesn't have a chance in hell of doing well in school. There is no chance. Because those wiring, the nerve network of the brain never developed properly. Just go to Google and type in "phthalates and neurogenesis." Here come the studies that show that phthalates inhibit brain growth and development.

Jodi: Right, and people don't talk about this when they're talking about the immune system and detoxification. If your parasympathetic state is shut down, your body can't tend to those issues. Can you elaborate a little bit about how sympathetic dominance or depletion kind of contributes to poor detoxification and immune function?

Dr. Tom: You bet. I'd just like to make one more point first. And that is why I brought it up, Just 1 Hour a Week... concept that I made. So one week you're going to go back to the book and look for the three URLs that I mentioned in there, mileskimble.com, Amazon, and whatever the third one is, I don't remember, for glass storage containers.

Jodi: Yes.

Dr. Tom: And you're going to look at it and say, "Oh, those, oh, I like those. Oh, I'm going to order those." And you get three round ones, and two square ones, and one for the pies, and you pay with your credit card, hit send. It took an hour to do that. But now you never will poison your family again with minor amounts of phthalates from leftover food, because now you have glass storage containers. Jodi: Yes. And don't use the plastic tops on the coffee-to-go either.

Dr. Tom: Exactly, exactly. But some people, "Well, the glass storage containers have plastic lids." Don't turn the food upside down in the refrigerator, so it's resting on the plastic. Right?

Jodi: Right, right.

Dr. Tom: That's all you have to do. So, when you are in a state of sympathetic activation, and your body has worn down, and so you move to sympathetic depletion, but your system is still being activated to protect you, is being demanded upon, the stress of life, the stress of life, the stress of life. We call that whipping the dying horse. That you just want that horse at the stage coach, because the stage coach is being chased by bandits, and so you're whipping the horse. And it's about to collapse, but you're whipping it anyway. And that's what we're doing with our lives these days, is whipping the dying horse. When you're in a state of adrenal depletion and your adrenals just can't respond properly. When the adrenals can't respond properly anymore, the body is going to call up the reserves.

What are the reserves? Thyroid starts getting whipped. What are the reserves? Your immune system is being whipped all the time because of all of the toxic chemicals that are in our bodies. We all know every newborn child today has over 200 toxic chemicals in their bloodstream. Some studies say 280 at birth, and these chemicals aren't supposed to be there. I'm sorry, they're not all toxic, I shouldn't say toxic chemicals, 280 chemicals in the bloodstream that aren't supposed to be there. And the human body doesn't have detox pathways designed to break down those chemicals. So constantly, there's this push-pull. There is this demand, to fight these toxins, fight these toxins, fight these toxins. And at the same time, you're trying to be mellow, and healthy, and relaxed, and work on parasympathetic dominance. It's just an impossible task, it's overwhelming.

Jodi: Right, it becomes a vicious cycle.

Dr. Tom: That's right. That's why one hour a week is so important. It's the baby steps. And six months down the road, you've got this. 20 or 25 things that you modified in your life over the course of one hour a week. And in six months, you've tweaked it, you now are on a path creating an environment to get back to parasympathetic dominance.

Jodi: I love that, because stresses are additive and cumulative. And so what you're saying is the roadmap to unravel it is additive and cumulative. Would you mind sharing a few more of your favorite tips from your book, please?

Dr. Tom: Oh, sure. Turn off the wireless at night. EMF toxicity is sometimes more influential than biochemical toxicity. Meaning the food you're eating is a problem, but sometimes if you're EMF sensitive that is something you need to address. How do you know if you're EMF sensitive? Just a few common things. You say right sometimes when you mean left, can't quite get directions when you're driving, you write the number three backwards. You put "E" before "I" when it's "I" before "E", except after "C", and you just do it reverse and say, "Oh, I know that." Or you misspell words, you put the "I" before the "T", or the other way around, you know, that you get things backwards.

It's called neurological switching. And it was my first week in my chiropractic education, in my health education. My very first week, I knew absolutely nothing. This was January, 1978. And I saw a sign that Dr. Sheldon Deal would be on campus this weekend, speaking. Mr. Arizona. Okay, the guy's a bodybuilder, healthy guy, I'll go listen to what he has to say. And he had a color TV on in the room, on a big stand.

The volume was turned off, but the picture was visible. Walked over to his briefcase, opened the briefcase, took out a bar magnet the size of an iPhone. Holds it up, walks to the color TV, the picture goes upside down. Walks away, it goes right side up. Walks towards it, it goes upside down. Walks away, goes right side up.

And this is when color TVs first were new. And they hadn't quite figured out that balancing act yet. And he said, "That's what electromagnetic pollution does to your brain." It's called neurological switching. People say right when they mean left, they can't quite get directions. They look at the map and they can't quite interpret it on the road, or they remember there's two turns, okay, turn right, and go three blocks, turn left. And they turn right, and they say, "Now, when was I supposed to turn left?" They don't get it.

Dr. Tom: That's neurological switching. That's an electromagnetic pollution problem. And at the time, he was talking about batteries on watches. And that was the pollution that he was talking about for highly sensitive people. It made the difference between health and disease. Now we're so far down the path of electromagnetic pollution. We're way, way past just the simple watch concept. Now we've got 3G, 5G, and all of the nasties with that. But you know, the concept, it's so overwhelming, for everyone. But what I hope everyone walks away with today from this talk is one hour a week. That's all. But just every week, like this. And there was a guy in 1984, Barry Marshall, a microbiologist in Australia. He said, "You know, I think that sometimes ulcers are caused by bacteria."

Jodi: H. pylori, right?

Dr. Tom: Everyone said, "What are you? A nutcase? Everybody knows that ulcers are caused by too much acid in the stomach. And you have to take antacids." And he was ostracized. So what did he do? He did an endoscopy. Tube down his throat, took a picture of the healthy pink tissue of his stomach. Then he drank a beaker of H. pylori, *Helicobacter pylori*, waited a couple of weeks until he was as sick as could be. Then another endoscopy, took pictures of the ulcerated tissue in his stomach.

Jodi: Wow.

Dr. Tom: Then he did the antibiotics to kill H. pylori, waited another couple of weeks till he felt better. Then he took another endoscopy, took pictures of the healthy pink tissue of his stomach. Then he published the paper with the pictures. Then everyone knew he was a nutcase. But the World Health Organization picked up on this, and sent it to every medical society in the world and said, "Pick up on this." Why? Because stomach cancer, at the time, was the number one cancer in the world, especially in third world countries. And H. pylori is a trigger to stomach cancer. So Barry Marshall demonstrated that sometimes, it turns out to be over 95% of the time, ulcers are caused by an H. pylori infection.

Jodi: But that's also correlated with stomach acid, because when stomach acid isn't high enough, then the opportunistic bacteria can overgrow it. Right?

Dr. Tom: That's exactly right. The environment of the stomach. So he still was ostracized, because he was a nutcase. 21 years later, he wins the Nobel Prize in Physiology.

Jodi: Wow.

Dr. Tom: And what they said, and this is the exact quote, "Who with tenacity, and a prepared mind, challenged prevailing dogma." That's why one hour a week, that's tenacity. Every week without exception. This is your health. Every week, one hour a week. Prepare your mind by watching this summit again, listening to some of the interviews, reading books. With tenacity one hour a week, you learn something new to challenge the way that you currently live your life.

You're in sympathetic depletion, and you need to get to parasympathetic dominance. That's the goal, right? And so you win your own Nobel Prize in medicine, in health. You win the Nobel Prize in health for you and your family when you allocate one hour a week to apply what you're learning, and avoid being overwhelmed by thinking you have to do it all right now.

Jodi: Yes. Well, it sounds like your book is a great roadmap. Can you show that again and say the title so people can go find it?

Dr. Tom: Sure, it's called *You Can Fix Your Brain*.

Jodi: And if people want to learn more about you, where can they find you, Tom?

Dr. Tom: Oh, thank you, thedr.com. Don't spell the word "doctor" out, the-DR.com and *You Can Fix Your Brain* is there, the book you referenced *The Autoimmune Fix*, which won a National Book Award is there. This book, *You Can Fix Your Brain*, number one in seven categories for brain and nervous system function. Because you know, "Wow, I didn't know this. I didn't know. This is the map. You want your brain working? This is the map." And I chose the brain for this book because one out of three elders now dies with dementia, or Alzheimer's. One out of three.

Jodi: That's huge.

Dr. Tom: That means between you, Jodi, me, and you, the listener, one of the three of us will die with dementia. And it ain't going to be me.

Jodi: Well, hopefully not, because they're going to be reading your book.

Dr. Tom: That's exactly right. But that's the statistic right now. And see, Alzheimer's is a decades-long disease. It develops over decades, not over a year. It's decades, with at least six different steps. And I talk about it in the book a lot. So you don't know that this is happening to you, and you have to be in a state of sympathetic depletion for this to be happening,

Jodi: Right. Because that allows the toxins and the beta-amyloids to build up in the brain undetected, until boom, you lose function.

Dr. Tom: That's right.

Jodi: Wonderful. Well, this was amazing. Thank you so, so much. So brilliant, and I hope everyone goes and buys your book.

Dr. Tom: Oh, thank you so much.