



**Transcript of “Dr. Tami Mergalia: Testosterone
Supplementation, Skinny Fat, & Adrenal Fatigue -
#206”**

Bulletproof Radio podcast #206



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Dave Asprey: Hey, everyone, it's Dave Asprey with Bulletproof Radio. Today's cool fact of the day is that even though the word hormone has only been around since 1902, Chinese healers have been using endocrinology techniques since at least 200 BC, where they would use hormones extracted from human urine for healing purposes. I'm glad we have better ways to do it today.

Today's guest is Dr. Tami, who is a double board certified physician. She does integrative medicine, which is like functional medicine, as well as aesthetic medicine. So if you want to look good and feel good, you talk with Dr. Tami. She runs the Vitality Medical Clinic in Seattle, relatively close to where I live, and she's trained physicians in advanced injection techniques across North America, so this is pretty cutting edge stuff. She has been featured in Fox National News, and she has a new book from Simon & Schuster called *The Hormone Secret*, which talks a lot about hormones.

One of the areas of biohacking that I care enormously about is hormones, because you get your cells working right, you get your mitochondria working right, you get your neurotransmitters working right, but if your hormones are off and you're like one of those people who's maybe accidentally injecting masses of testosterone, you walk around acting super angry all the time, or you have your progesterone/estrogen ratios and you act crazy all the time, that can be men or women. Stuff like that kind of matters when you're just working on being high performance. That's why Dr. Tami's on the show. So, Dr. Tami, welcome.

Dr. Tami: Thank you so much. Great to be here.

Dave Asprey: Tell me something interesting about yourself that people probably don't know. Like what did you do before you were a doctor?

Dr. Tami: I danced as a soloist professionally in a ballet company. Not the usual segue to medical school.

Dave Asprey: So you're a ballet dancing doctor.

Dr. Tami: There you go. You could say that.

Dave Asprey: What made you become a doctor when you were so into art?

Dr. Tami: I didn't think I was going to be a doctor, actually. I went to school afterwards, after many, many injuries, and I thought, "Oh, you know, I'll be a counselor." Took a bunch of counseling classes and psychology classes and I thought, "No. Chemistry is my favorite class." So then I kept taking chemistry and loving it, and anatomy and physiology and biology. It just sort of fell into place. I grew up in a really small town, actually in Canada, just north of where you are, Dave, in Squamish, British Columbia. We had the old-fashioned doctor who really looked at root causes and looked at family dynamics and nutrition and came to our house. So I had this vision of a doctor that actually cared about everything about you, not just your presenting symptom. I thought, "Wow, that's what I want to do."

So I went to medical school, but medical school is all about diseases. Even your "wellness visit" is focused on finding diseases at early stages. It's not anything about wellness. So I finished, did really well, and I thought, "Wow, I know a lot about diseases and conditions of decline, but I know nothing about wellness." The absence of disease does not equal wellness. It just means you're not sick. So I went back, started a whole other education, and got board certified in integrative medicine. Now I get to do both. If somebody's really, really sick and may have an infection that they need to find a quick fix and an antibiotic, great. But the antibiotic's going to destroy that, and let's find out why you're susceptible to that in the first place and combine them.

But hormones are my passion.

- Dave Asprey: I know that when I started out my kind of path here, I was maybe late 20s, and I got my first hormone panel when I saw an anti-aging doctor, because I'd been influenced by the work of the Silicon Valley Health Institute, I'm still a chairman of today. I got my numbers. I had really high estrogen, which partly explains all the stretch marks that I have. Since I was 16, I've had masses of stretch marks. Even though I have a 6-pack, it usually has the zebra stripes on the sides, and I don't think I could do much about that.
- Dr. Tami: No.
- Dave Asprey: But when I did that, I looked at the other things that were happening. My estrogen was super high. My testosterone was way low. I think it was lower than my mom's testosterone, actually.
- Dr. Tami: Yikes! You're taking it all and putting it into estrogen.
- Dave Asprey: Exactly. Stuff like that, especially when you're a young 30-year-old or something, and you want to feel masculine. You're like, "Well, maybe there's a reason I have these man boobs." This happens a lot, more than people recognize. Their levels are suboptimal. But one of the questions I have for you is, without going and seeing you in Seattle, how would someone listening to this, they're driving in their car, a man or woman, how do you know that you should pay more attention to hormones? Is there a smoking signal that I should look for? What's the telltale sign that your hormones are jacked?
- Dr. Tami: Well, I love it, because my favorite hormone for women is testosterone. I know that sounds really weird.
- Dave Asprey: Not at all.
- Dr. Tami: But I think it's so overlooked. We only need a tiny bit, but it has an outsized role in our health and how we look, feel, and function. It affects everything from our brain, our bones, our hearts, our fat/muscle ratio, our mood, how much energy we have. It's basically the secret weapon, is this testosterone. I think that

women who are looking at estrogen and progesterone, they kind of know whether you have estrogen, because it's the hot flashes and thing. But some of the things that you might not know about progesterone for men or women are the irritability. You know that, I've got to work a little harder to keep my cool, whether it's at work or at home. Because progesterone is your peaceful hormone. It's really the Valium that bathes the female mind, and it is also peaceful for men. So when you lose your piece, and progesterone leaves in our 30s.

Dave Asprey: Do you have a recipe for progesterone salad dressing I could put on Juana's salad? Just kidding.

Dr. Tami: Yeah, that's nice. But you know, there's over-the-counter progesterone cream, so maybe you can give her a massage.

Dave Asprey: And get it all over myself, too.

Dr. Tami: Well ...

Dave Asprey: It's so peaceful.

Dr. Tami: It blocks the conversion of your testosterone into DHT, so you could keep your hair. That's all good.

Dave Asprey: I've got the hair flip down. I'm working on it, now that it's growing out a little bit.

Dr. Tami: You like that. But the thing that I don't think people realize is their testosterone deficiency symptoms. Weird things, like you know those wrinkles on your lips, the smoker's lines, and you've never smoked before? That has a lot to do with your adrenal dysfunction and the fact that your adrenal glands aren't producing your testosterone anymore. Waking up more tired than you went to bed, and you're the same weight, but you're fat, you have that seal-like ratio of fat to muscle. For men, they'll find that they'll work out, but it really wipes them out and they don't recover quickly. Osteoporosis. These are all signs of testosterone

deficiency that people aren't looking to testosterone as the cause or the fix.

Dave Asprey: So testosterone, you said it was your favorite hormone for women. It's actually my favorite hormone for women as well. There's a couple reasons for that. One is, it raises libido, which is always nice, when you're in a relationship like that. But the other reason, and I talked about this with Dr. Sarah, who was sort of like, "Don't tell anyone!" But if you take a super tiny amount of topical testosterone cream and you apply it to the labia, why does it have a very strong blood flow effect?

Dr. Tami: It's very vasodilatory, and that's why we find it beneficial in the heart. They actually have done ultrasounds and they see that the arteries dilate, so we know that testosterone dilates. But I think you and I have talked about this before. You had said that I was one of the few physicians that you knew that prescribed cream. It's exactly what it sounds like.

Dave Asprey: Yeah. It's one of those things where, okay like maybe ... People listening it's like, what are you talking about. Well, you'll have to figure it out. But if you give too much testosterone to a woman, though, what happens.

Dr. Tami: There's lots of side effects. The first ones are cosmetic, increased facial hair, acne. That's why I think that you should try first to biohack your own body, and to reboot your own biology. Your body can produce testosterone with your adrenal glands if you give it specific ingredients and take away certain stressors and get out of the way. So there's nutrition, there's supplements, and then lifestyle things that you can do to actually boost your testosterone. They've been proven in studies to actually, measurably increase your testosterone in blood tests. So it's pretty cool. Then, if you do it that way, if you're biohacking your own body, you don't have to worry about the side effects. Because if you started low, and 90% of women over the age of 40 have low to nonexistent free testosterone.

- Dave Asprey: That kind of sucks, to be personally honest.
- Dr. Tami: Because testosterone not only rocks your bedroom, it rocks your life.
- Dave Asprey: In your new book, what are, say .. Well, let's do it first for women, then for men. For women, the top 3 things that will raise their testosterone naturally?
- Dr. Tami: First of all, you want to look at sugar. Sugar is a testosterone killer. It's not like the general, like, "Oh, sugar's bad for you." They have literally done studies, take your blood, check your testosterone, eat sugar, take your blood an hour later, and it goes down over 25%. That's just a testosterone killer. So a good hack for testosterone nutritionally is cut the sugar.
- The second thing is fat, and I love that you're so knowledgeable and you get the word out that this fat-free phase, when are we going to get over this? Fat is good. Fat is needed. Cholesterol is good. This is what all these hormones, especially testosterone, are made out of, so you have to include good fat and plenty of it. I know your family eats a ton of avocados. So does my family. The kids are slathering it all over everything as if it's butter.
- Dave Asprey: I found out a new trick. You can actually dip a stick of butter into guacamole and then take a bite, like instead of a chip. It's so good.
- Dr. Tami: Fat on fat, I love it.
- Dave Asprey: Just kidding. I haven't really done that, but I would.
- Dr. Tami: Well, my kids take the broccoli stalk and dip it into the butter. So those are the 2 nutritional hacks that I think are the best. Two of the supplements that can make the biggest are maka, which is one of the most ancient herbs used medicinally, and it was for vitality increasing. What it was really is increasing your testosterone. So maka in the dose of 500 to 1000 mg is usually going to help increase your testosterone. And ashwagandha, an ancient Ayurvedic herb that actually helps increase the testosterone, but

also increase the bioavailability of the testosterone. Babylon you can also "get" more testosterone not just by increasing just the quantity, but being able to get it off a carrier protein, and getting more useful testosterone active into the receptors and into the cells.

Dave Asprey: What happens to a woman's body if she basically eats a diet of mixed greens and protein, like chicken breasts, the low-fat, high-protein diet, with some moderate veggies? What's going to happen to hormones on that versus adding a bunch of guacamole and butter and whatever else to the diet?

Dr. Tami: Well, the adrenal glands are saying, "Okay, I got part of the picture here, but I need to produce these great hormones, progesterone, testosterone, DHEA, that are really going to rock your life, but I don't have the ingredients." It's really like you've got a cake that you want to bake, and you've got some flour, but you have no baking soda, no baking powder. You might have 1 egg, but you need 3. So your adrenal glands really aren't able to produce it, because they don't have the raw ingredients to make those hormones. You need the fats in order for your adrenal glands A) to function properly, but it's also those fats are literally needed to make these androgen hormones especially. So you're not going to have your life as fit, as strong, as energetic, as creative, because there's tons of testosterone receptors in your brain, and you're not going to look as good, because your fat to muscle ratio, even if you are thin.

So here's a true story, Dave, I want to share with you. I danced professionally in a ballet company. I'm thin. I'm thin genetically. But after I had 2 kids, my weight went back down to "normal," but my ratio of fat from in my 20s to in my late 40s increased over 10%, like almost 20%, and I was the same weight. When I looked at my testosterone, it was nonexistent. When I boosted that back up, without really changing anything in my lifestyle other than my nutrition and supplementation to focus on testosterone. I wasn't working out more. I didn't weigh less. I got lean and mean, instead of being thin and fat. I was a skinny fat person.

- Dave Asprey: Yeah, skinny fat is always an issue, because there's a lot of people walking around saying, "I can do whatever I want." I have 2 gluten burgers and wash it down with beer. They look good. But talk more about skinny fat, like what is it, and why should people be concerned about it?
- Dr. Tami: I think it's even more dangerous than people who are like 100 pounds overweight. If you're 100 pounds overweight, there's no question in your mind that the first thing that you think about when you wake up is your health and how frightening your state of health is, and what a focus it needs to be. But when you're a skinny fat person, you're of an "average weight," but your percentage of fat far exceeds what it should be for your height and weight. What that affects is your cardiovascular risk. It also puts you at a huge increase for diabetes. To be a skinny person that's diabetic is so rough, because 1 of the easiest ways to become a non-diabetic is to lose weight. Well, you can't easily lose that weight. So that fat we know is an organ. We used to think fat was just this cosmetic thing. It's a living organ that produces hormones, and it screws up all the rest of the hormones, and it makes you feel a certain way. It actually makes your estrogen into bad estrogen, and increases your risk for breast cancer. So all of these things are happening to you, and you think that you're all that and a bag of chips, because you look good in a bikini.
- Dave Asprey: So when you're skinny fat it's dangerous, because you're literally packing the fat around your organs, instead of letting it hang out over the waistband of your pants.
- Dr. Tami: And the lack of awareness. There's a lot of people who are skinny fat that don't know that they're fat.
- Dave Asprey: How do you know that you're skinny fat? Okay, assuming that you're not going to go get a DEXA body scan or something. So now there's a bunch of people sitting listening to this while they're working or everything, going, "Am I skinny fat? I think I have it caught." How do you crack the skinny fat code to know if skinny fat is a problem for you?

- Dr. Tami: I think 1 of the first indicators is when you're sitting, if you're a skinny person, you shouldn't really have too many rolls, and you should be able to grab a hunk of burning love.
- Dave Asprey: You should be able to?
- Dr. Tami: You should not. There isn't this big roll here when you're a fit person who is of their weight and fat/muscle ratio. But when you're a thin person that has a high percentage of fat, you can grab it. That's means it's not muscle. It's fat. So that's a good sort of like, hmmm. Everybody has some. Are you checking?
- Dave Asprey: I'm grabbing it. I don't know if my camera's the height. There.
- Dr. Tami: That's skin.
- Dave Asprey: I don't think I'm skinny fat because I used to be totally just grossly obese, so I'm unlikely to be skinny fat.
- Dr. Tami: Oh, you're not skinny fat. Everybody can grab an inch or 2. I'm talking like a chunk. That's 1 of the good things. And then, you know, every gym can just give you a quick test.
- Dave Asprey: A body caliper test? Is that going to be enough?
- Dr. Tami: Yeah, those are not great, but it's a ratio. I think that if you get a sort of okay test that you have an inkling anyways, and you implement some health enhancing things, who cares if you have the accurate information, because you're treating it. However, what you want to do is at some point go, hmmm, have I got there? Have I got the success? Do you in your practice ever talk about ... I know you don't see patients, but you do a lot of education. Do you have a device? Because I know I prescribe your Fitvibe for osteoporosis.
- Dave Asprey: The [Bulletproof Vibe](#)? I love that thing.
- Dr. Tami: That's awesome for toning.



- Dave Asprey: I'm totally uncertified. I'm an unlicensed biohacker, so I don't ever have patients. But when I'm helping people perform better, we talk about ways to exercise and tighten up after weight loss. The [Bulletproof Vibe](#) works for that, for sure. But you actually use it for people who are skinny fat? Is that what you're saying/
- Dr. Tami: Well, mostly for osteoporosis.
- Dave Asprey: Okay, for getting your bone density back. That's pretty well established in literature that your bones are piezoelectric, and when they get weight bearing stuff like trampolines, or 30 times a second trampoline, that they just respond naturally if you have K2 and D3. I get that.
- Dr. Tami: And yours, Dave, is unique, because a lot of them on the markets go this way, and so your hips end up just getting trashed, or your low back, and you don't understand why. Yours is one of the only ones that is up and down, not back and forth.
- Dave Asprey: That's why we make it that way, exactly. Because I've broken welds on 2 of the cheap ones. My low back always hurt on those. But you see it in your waist. Because you tighten up in your midsection from it, but then you feel crappy because your back hurts. It's awesome. I didn't realize that you had one.
- Dr. Tami: Oh, and my patients, everybody who has osteopenia or osteoporosis, I just cut and paste your website. I just need to get an easier way to do it. Maybe I should just hand out your cards.
- Dave Asprey: Oh, thank you.
- Dr. Tami: The reason is, is it works. And who has more time for exercise?
- Dave Asprey: It's reasonably affordable. There's like a \$15,000 whole body Vibe thing out there, and I had a chance to use one for a couple months several years ago. It's like this big heavy thing, and it has like a speaker coil. It was like the Rolls Royce of these things, but that's out of reach for me. So making one that wouldn't break, that was made in the US and all, was kind of like, I just wanted one that I

could always rely on. I'm so stoked that it's working for people. It's kind of a little side project compared to coffee and the things where I spend a lot of my time on biotoxins. But you just feel good.

- Dr. Tami: It does. Well, and then I add the testosterone, because there is a study that showed that testosterone, compared to Fosamax, to treat osteoporosis, had just the same or better results, and no side effects. You know, necrosis of the jaw, that's kind of a big deal. That's the most common side effect with Fosamax.
- Dave Asprey: So your jawbone starts to die and rot if you take that.
- Dr. Tami: And how do you replace that? How do you fix that?
- Dave Asprey: You can have a square jaw when you're done, because you could just pick the shape of jaw replacement you want.
- Dr. Tami: But I love that the studies are there. Because at the end of the day, even though I practice naturopathic integrative medicine, I'm an MD, so I'm super cynical. I'm like, "Yeah, prove it. Show me the data. Show me the science. It's got to make sense." Anything that's powerful enough to do good, is going to be powerful enough to do harm.
- Dave Asprey: A fair point. How do you do testosterone and whole body vibration? Is it, like, do you take it right before? Or it just matters that you take it at some point during the day, and then you have people do a few minutes of vibrating, and that's that.
- Dr. Tami: I get their testosterone levels upped into the optimal range in a blood test.
- Dave Asprey: Okay. So you're using blood testing. Cool. Now, I want to go back to something you talked about, because this is just a smoking gun in everyone's health. You talked about adrenal function. When your adrenals get weak, your hormones get jacked, but you also tend to get autoimmunity as a result of having poor adrenal function. So like, "I was doing great, and then I got really sick, and somebody in the family died, and I got stressed, and then

everything went to hell and never came back." Right? I'm guessing you've probably heard that once or twice from patients, right?

Dr. Tami: Today.

Dave Asprey: So now, is it that the adrenals are causing autoimmunity when they fail, or is it they're causing a hormonal problem when they fail?

Dr. Tami: Yes.

Dave Asprey: It's both?

Dr. Tami: There's so much. Your adrenal glands, really, nobody even knows how important these are. We just think, oh, our adrenal glands is about stress hormone. Yeah, we were designed to run away from a bear, and it was supposed to last about 22 minutes, maybe. It wasn't supposed to last, the emails, and the traffic, and the deadline, and the boss, and the lack of fresh air, and not eating real food, and the screen time before bed, and the lack of sleep, and the screwed up circadian rhythm. It really wasn't designed to keep going in our 24/7 life. So they're very exhausted, and they're draining our hormones at an earlier and more significant stage than ever, ever before. The problem is, is that you also get set up, and this is where I really wanted to dive into my book. There's a lot of great information out there about hormones. But I wanted to bring the flip side of things. Like, hmmm, so yeah, it drains your hormones. Okay, then just take more hormones. You know, that's the American mentality. Okay, I'll just replace it. But this ratio of catabolism versus the anabolic, building up, healing, rejuvenative stuff, creates an inflammatory process that ends up being far reaching. Autoimmunity, cancer, osteoporosis, dementia. Inflammation is the source of so many things that steal our health and vitality and cause us to live, if not a less lengthy life, it makes our life short and our death long. Does that make sense?

Dave Asprey: It does. Let's go back to teenage time. I'm thinking specifically, because you come from the world of LA. One of my friends,

Callista, is a teenager, and she's working really hard at one of the top ballet schools in LA. I cannot believe just the amount of physical stress that she puts her body under to become one of the world's best ballet dancers. So I look at that, I'm like, "More [collagen](#). More fat." But there's like an adrenal stress. When you went through that same kind of training, probably almost exactly the same as what Callista's doing, what did they tell you to do nutritionally, and what would your advice be for teenagers who are doing really stressful things like that?

- Dr. Tami: I actually wrote a blog, The Five Things I Learned from Being a Professional Ballet Dancer. My lunch used to be, here I'm aging myself, Dave. I'm 50 this year.
- Dave Asprey: Oh, wow. Congratulations.
- Dr. Tami: So my lunch was a Diet Tab.
- Dave Asprey: Oh, Tab? I remember that stuff. It tasted gross.
- Dr. Tami: And maybe a half an apple.
- Dave Asprey: Oh, you bad person, you.
- Dr. Tami: I was weighed. I know right? How awful. So the diet, I mean, just how horrible could that be nutritionally? Then I was exhausted all the time, because of course I wasn't eating anything that blessed my body. In fact, it stressed my body. So I would have a spoonful of honey in the wings before I went on.
- Dave Asprey: So you wouldn't pass out?
- Dr. Tami: And I was weighed on a regular basis in order to be thin. Then the rigors of dancing. Now that's not the case. There's a much bigger focus on health and sustainability now in the ballet world, and in all of sports. Nutrition is huge in sports now, as you know. You're a great peak performance helper out there with information.

- Dave Asprey: I know. Calli drinks bulletproof coffee every day. She's eating the [Bulletproof Diet](#) because she thinks it makes her dance better just to have all the fat and all. But I know that probably all of her coaches don't necessarily agree with it. So let's say that knowing everything you know now, now that you've studied medicine, and you've done that, if you're a teenager, and you're going to be kicking ass physically, whether it's dancing, or you're a long distance runner in track, or wrestling, whatever. But there's all sorts of kids who just really probably over-train, and are probably not eating that well. Like top 3 or 5 things, that now that you know, having been there and done that and studied everything, what should they do.
- Dr. Tami: Eat more fat.
- Dave Asprey: Okay, fat. Got it.
- Dr. Tami: Don't obsess about protein.
- Dave Asprey: Amen, brother. All right.
- Dr. Tami: I know. You and I are so unique in this space. Right? And you know what the third thing, it sounds so simple, but it's such an anti-aging gift, is get a minimum of 7 hours of sleep, and start it before 11:00 p.m., because your circadian rhythm, your cortisol levels, are going to start going up at 3:00 and 4:00, so it's like for dieting. You've got to get to the bottom of the tables, and visit each of the 5 stages of sleep. If you're starting back up to the surface at 3:00 or 4:00 in the morning, if you haven't gotten down there, you're not getting the rejuvenation. Sleep is where tons of hormones go swimming around your body, and they help with performance and they help with healing. They go survey, look for early cancers, take it out, apoptosis, all this amazing stuff happens when you're sleeping. I think that ... People say, "Well, I can get by on 4 hours," or "I don't need 7 hours. I'm good at ... " If you had a million-dollar horse, would you give it what you could get by on?

- Dave Asprey: Depends if you're going to eat it or not. Just kidding. I grew up with a horse.
- Dr. Tami: Italians do that.
- Dave Asprey: I just offended everyone, but it's funny.
- Dr. Tami: Shocker.
- Dave Asprey: The truth of the matter is, if you want to manage a high performance animal, including you, of course you want to give it the good stuff, and that's core to my philosophy, and yours as well.
- Dr. Tami: You're stuck at yourself still.
- Dave Asprey: What's the ... Okay, so we have 7 hours. But let's face it. I don't know any 18-year-old who's "Oh, it's 10:45. Sorry guys. I know we're at the movie theater. I know we were going to stay out late and do other only semi illegal things. You know, so I'm just going to go to sleep now, because I want my apoptosis ..." It's not going to happen. If you just assume that at least 50% of the nights that teenagers are wired to stay up late, what can they do to minimize the harm of staying up late?
- Dr. Tami: Work to your adrenal glands, so that the stress of being sleep deprived is a little bit compensated for. You know, what you do in the morning, is I think 1 of the best biohackers. That's why I think that your coffee is so great. I always add protein to it as well. So the good fat, the protein in the coffee.
- Dave Asprey: I put collagen in my coffee some mornings. I don't intermittent fast bulletproof style every morning. In fact, yesterday, I put 50 grams of collagen in, just to see what happened. Normally I do 30, because I don't want too much.
- Dr. Tami: I think having protein within 30 minutes of waking up, and that good fat, is really protective. It's like nurturing your adrenal glands. Studies show that if you eat a little bit of protein within 30 minutes, but you've got to have that good fat in there, too, you're

going to eat about 200-300 less calories throughout the day, just because you've had this stabilization of your blood sugars, because your cortisol isn't going up and down and up and down. And then you lose weight, without even knowing it.

Dave Asprey: There's some intriguing studies around that same thing, having protein in the first half hour. That's why in the [Bulletproof Diet](#) book I'm like, if you're fat or you're leptin resistant, have protein in the morning when you first wake up. But you probably don't need to do it every day after you've reset your leptin sensitivity. But something intriguing that I was just reading about, I think it was on Bill Lagakosis's blog, Calories Proper. He's the first guy I've seen who pointed this out. He was talking about you have central circadian control, and you have periperal circadian control. Central is food mediated, and peripheral, which means like the smaller ones essentially, are light mediated. So if you want to be a really good, whether you're a teenager, or sleep hacker ... By the way, don't hack your sleep if you're a teenager. Really, you should get sleep till your brain is done growing.

Dr. Tami: Which is 25.

Dave Asprey: Exactly. But since that's not what we do as teenagers, because we're human. Meanwhile, eating that protein in the morning, especially if you jacked up your sleep the night before, is a better idea than doing a bulletproof intermittent fast. The way I implement my protein in the morning to make sure, especially when I travel I do this, if you want to reset your jet lag, I didn't understand why it works till I read this, but I'll take a little jar of collagen, the [Bulletproof collagen](#) powder with me. I'll put it in my coffee in the hotel room. So then I wake up. I've made the coffee. It's easy to make coffee when you first wake up in the hotel room. And then you're good to go for the day. But especially when I travel east, it's just a great idea to do protein in the morning. I totally endorse what you're saying there, and I believe circadian timing is a part of it that most people don't know about. Is that something you would believe?

- Dr. Tami: Absolutely. Then using the peripheral circadian rhythms, like you're saying, this is all the cool stuff that I put in my book. I just felt like there was a paucity of to doable, implementable, even if those are actually words, plans to take all of this great double blind, placebo controlled, clinical information, and create it into shortcuts. I have 2 children. My husband works out of town, and I see patients every single day. I had to figure out the shortcut. So it's all of my shortcuts. So that, and then, you and I live in ... I live in the Northwest, and you live in British Columbia, and we're plagued by this grayness. That does not help our sort of peripheral external circadian rhythms. Because really what you want to do is have that night darkness, so no screen time, no black light. Make sure you're sleeping in a dark, dark room, or wearing a sleeping mask. Then in the morning, turn on all the lights. Make sure you have full-spectrum lightbulbs. Try and get that stark change, because that's really more important than anything, is the change.
- Dave Asprey: In the Bulletproof Coffeshop that's opening, I'm really hoping like mid April, fingers crossed, depending on approvals, in Santa Monica, we're building in circadian compliant lighting. Literally, there's a light box there.
- Dr. Tami: So I'm singing your song.
- Dave Asprey: It's so cool, because it matters. In the Bulletproof biohacking labs, which are going to be where we film the podcast pretty soon here, as soon as we're done with the final construction tidbits, I've just been testing out the lighting there. At night, the exterior lighting is red LED floodlights, and it looks like Dracula's thing. But you walk outside and you can still see the stars, and the eagles and owls and frogs and all the animals that live around me totally aren't jacked up by the light. The neighbors think I'm a vampire. It's all cool. But having that happen, I swear, I'm changing all the exterior lighting to red. It's so relaxing to go outside at night now. I love it.
- Dr. Tami: Yeah, it's so jarring. We really just weren't designed to do this. You'll have to put a link or some information about this on this

podcast, because I'm sure people are going, "What is Dave talking about? Where do I get red lights for outside?" That would be great.

Dave Asprey: I'll do that. It's hard in a city, because there's just light pollution everywhere. But I live on an island, and I don't see any lights unless there's a container ship anchored down there. Sometimes they have floodlights on. Then I'm like, man, I can see a light from my back deck. I'm very fortunate that way. But your advice, and mine, too, use a sleep mask, or better yet black out your bedroom, because our skin has photoreceptors in it, too, right?

Dr. Tami: And then the bright light is ... Remember when you were a kid and you woke up in the morning and you were like, "All right! I'm going to go ride my bike." And now when you wake up in the morning it's snooze button once or twice, and you only have 1 eye open until after your coffee. Right? So really what you want is you want that light to be really hitting the back of your retinas. I would love to make a bathroom mirror with all these lights around it. So the first thing you do is you get this blast. Because that light hitting the back of your retina makes this big cascade of things that turns into this blast of serotonin, and makes you feel good. That's why you want to go ride your bike. So we really need to kind of emulate those experiences, and open your curtains. But when you live places like us, it's hard. You have to implement that. I think that's why depression and seasonal affective disorder is so well treated with those lights.

Dave Asprey: I'm thinking of my wife's country, Sweden. There they just treat it with vodka. Isn't that ...

Dr. Tami: Yeah, well, you know, we can give them some testosterone. That'll help their life.

Dave Asprey: There you go.

Dr. Tami: Read my book.

- Dave Asprey: Totally. By the way, what's the URL for your book? I'm sure people who've heard you talk, they're like, "Oh, Dr. Tami gets it." So just what's the name and URL real quick? We'll do it at the end, too.
- Dr. Tami: Well, if you're listening before mid-April, I have a special gift for your tribe, and that's a free book offer. So they can go to drtami.com/bulletproof.
- Dave Asprey: Okay, that's D-R-T-A-M-I, if I remember right?
- Dr. Tami: Yeah.
- Dave Asprey: Okay, cool.
- Dr. Tami: It's a link that's just special for your tribe. I know that they're ... Your listeners are a little bit more tuned in to being able to appreciate the 2 years that it took me to research and write and document every single solitary study that proves that each of these herbs, and the specific doses that were needed, will actually make a difference, and it will basically, to use your phrase, it will biohack your health. You're going to get a boost.
- Dave Asprey: Let's talk about some of the down sides of testosterone. I went on testosterone replacement therapy when I was around 30, because my numbers were just in the toilet. So this is a dozen years ago. I had low FSH and LH. These are basic reproductive hormones that go along with testosterone, for people who are listening.
- Dr. Tami: Mother Nature was inviting you to leave.
- Dave Asprey: Mother Nature was kicking my ass. Part of the reason was because I was exposed to very high levels of xenoestrogens that are formed by mold growing actually in the walls of the house where I was living. So you have thousands of times more potent than normal estrogen. In fact, that's almost certainly why I got the stretch marks that I got much younger in life from the same kind of exposure. Stachybotrys I'm talking about. So excessive estrogen, not enough testosterone. The anti-aging physician I worked with, who has been on Bulletproof Radio and has done a

guest post about cardiac research, this is Dr. Miller, put me on a testosterone cream, like the stuff you rub in your armpits. It totally changed my brain. I started, "Wow, I feel like myself again. I've got my energy back. This is so cool." I was on Arimadex every now and then, which is an estrogen blocker, and just kind of an advanced anti-aging stack for a spry 30-year-old, but it totally worked.

Dr. Tami: Right.

Dave Asprey: And then after like 5 years I was like, "I don't need the Arimadex. I guess I'll stop cycling the stuff, because it just works so well." So what's going to happen to someone who's on regular testosterone, at least a man who's on regular testosterone for long periods of time without cycling, and without taking estrogen blockers?

Dr. Tami: Well, you always have to look at the estrogen. We have to look at the estrogen ratio, but a 216 hydroxyestrone ratio is associated with potentially an increased risk in prostate cancer in men. So you've got to know your numbers. You've got to know what is your testosterone doing, and what is it becoming. Right down to the end. I'm a freak. I don't believe that your blood, with regard to estrogen is good enough. I use it. But I want to know what it is in the urine. Because then there's no more changing. You can't get more end result than in the urine. So I check men's estrogen levels in the urine.

Dave Asprey: Two trips to New York ago, I was carrying around a backpack, because I was doing a 24-hour urine collection while traveling, so I'm like walking around with a jug of pee in my backpack. It was a very cool New York experience. But I got my numbers, and they were good. I would agree with you there. It turns out for me, I stopped, after I switched my diet and my exercise to the bulletproof stuff, I stopped over-aromatizing. My testosterone stopped converting into estrogen excessively. I take calcium D-gulcarate. It's on my top 10 list of supplements there, which helps your liver excrete estrogen that you do create.

- Dr. Tami: And you've got to clean out your liver so it can.
- Dave Asprey: That's helps. A functioning liver's always kind of like a decorative accessory for a good life. But the other thing that happens, right, is ... I'm trying to remember the medical word for this. Hypogonadism.
- Dr. Tami: Oh, yes.
- Dave Asprey: In other words, the guys shrink.
- Dr. Tami: The plums become cherries.
- Dave Asprey: Exactly. This is a common thing with testosterone replacement therapy. That actually happened to me, and of course, there are ways to reverse it. How would you go about reversing that?

First of all, I start off with trying to get, especially when you're 30, like let's look at the root cause. Let's see if we can heal your adrenal glands, because your adrenal glands really should be producing enough testosterone to rock your life. But I have a lot of executives who they're just so drained, they just need the testosterone at least for a short time. And then I have a lot of patients who are in their 80s and 90s. We do need to sort of augment what their bodies can do. I use HCG in conjunction with testosterone therapy. The HCG, human chorionic gonadotropin, which is not human growth hormone. They're often confused or they sound a lot alike. It fits the beta subunit of the leydig cells in the testes, so it tells the testes to produce more testosterone, thus preventing the shrinkage, because the testosterone gives the message, "Hey, you don't need to do this anymore. We've got it." So the testes, which are the factory, they shrink. HCG has to be cycled because you are fearful that you can create an antibody to it. There's many, many different ways to do that that have been studied, and very effective. But I always, always, always have my male patients on testosterone, say, you know what? This is how we're going to keep preservation under the belt, is with HCG. I also want to make sure that my male patients are getting the

blockers in the testosterone. I have a lot of patients who they don't like the needles. They travel a lot, like a lot of executives, and they don't want to travel with the needles, even though it's not a daily injection, because the oil is a dispersion. We do topical. There's a great herb called chrysin that does a really good job of blocking from the conversion of testosterone to estrogen. Testosterone's so hip that you've really got to know what are the downstream effects. Everything you do has another effect and has another effect. It does increase RBCs and hematocrit and hemoglobin in some men. So you've got to check the CBC. Lots of studies proving that it does not cause prostate cancer. But it's converting to a ratio of 216 hydroxyestrone, you are at an increased risk because of the conversion to estrogen. So there are all these things. It's like this amazing 5-dimensional puzzle, which I love. That's the way my brain works. You can't just mindlessly take testosterone.

Dr. Tami: The good news in my case is that I went on low dose HCG for about 60 days.

Dave Asprey: Oh, great.

Dr. Tami: Not HCG diet, where you eat like no calories and all that. But just low dose HCG. So the plums that had shrunk to cherries became grapefruits. No not really. But at least they were restored. Which is a testament to the kind of control we have over our own biology, which is kind of cool.

We are running up on the end of the show, Dr. Tami. I want to make sure that I get a chance to ask you that 1 question that I always ask, which is, what are your top 3 recommendations for someone who wants to kick more ass in life. So, I want to perform better at whatever it is I do, whether it's ballet, or something else. What is it?

Dave Asprey: Some of them are simple, and some of them are complex. I think that if you feel like you might have adrenal fatigue, if you are not performing because you are waking up tired than when you

went to bed, and your recovery time, then get the herbs ashwagandha and maka. They're safe. You can get them in powder form. You can really boost your vitality just by having those 2 things. That's just a mainstay in my life, my husband, he takes it as well, and especially when we travel. The second thing is, don't underestimate the power of water. All of your cells require water. You're going to look better. Your cells are going to function better. And I think ... Oh, you're drinking some water. I love, I'm married to an Italian, and so we have San Peligrino. The San Peligrino, the mineral waters, it's like even better, because those minerals are so hard to get into our diet and our food, and our farming practices have shown that our food doesn't have the minerals that it used to. So drinking mineral water is amazing. So just water, water, water.

Dr. Tami: Did you see the post I just did about San Peligrino?

Dave Asprey: No.

You've got to read it. Like there's a lot of science in there. For everyone listening, if you haven't seen that on the Bulletproof blog, it's a great post. It was really popular. But I went into the different minerals, particularly sulfate, and why there's a difference between different mineral waters. It was interesting, and everyone loved it, so check it.

Dr. Tami: Oh, I definitely will. How funny that we're both talking about drink more San Peligrino. We should buy stock.

Dave Asprey: No kidding. They should say thanks at least. But I've never talked to the guys there. So what's your number 3?

Dr. Tami: I think the last thing, the last thing is sort of a mindset. It is that you can reboot your biology, that what you put in your mouth matters. Nobody plans to fail. They just fail to plan. So plan your meals. Think ahead. Get good choices. You need to take ... you can become the CEO of your own body. Eat the 80/20 rule. That's my



rule. Eighty percent should feed your cells, and 20% can feed your satisfaction.

Dave Asprey: They can overlap, I'm hoping.

Dr. Tami: Yeah.

Dave Asprey: I find butter uniquely satisfying, and my cells seem to like it too.

Dr. Tami: Oh, there you go. Yeah, exactly. Like dark chocolate, you know.

Dave Asprey: Yeah, exactly. It's a food group. Dr. Tami, can you tell me your URL 1 more time. You had a special book offer for people if they want a free copy of your book, who are listeners. What's that number?

Dr. Tami: Yeah, free is a really great price. So it's drtami, D-R-T-A-M-I, /bulletproof.

Dave Asprey: Awesome. If people want to just read about your general work, it's Dr. Tami, and the name of your book 1 more time

Dr. Tami: The Hormone Secret.

Dave Asprey: Awesome. Thanks, Dr. Tami, and I look forward to hanging out next time I'm down in Seattle.

Dr. Tami: Excellent. We'll be happy to have you and your family over and get some bulletproof coffee in our kids.

Dave Asprey: Oh, that's right. We didn't say that on the show, and we're running up on the end of the show. But you and I both give small amounts of bulletproof coffee to our kids.

Dr. Tami: I know.

Dave Asprey: So they can get the butter and the fats, and yes, some antioxidants. All right.

Dr. Tami: Thanks so much.



Dave Asprey: Thanks. Everyone, if you enjoyed this show, if you're sitting in your car right now and you're like, "I was just entertained on my commute. I can't believe how short it was because of Bulletproof Radio," do me a favor and pick up a copy of the [Bulletproof Diet](#) book, or just say thanks and leave a nice review, or put a comment in the forums. Or even better yet, just do something nice for someone who's not expecting it. That would be cool, too. Thank you so much. Have an awesome day.

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