



**Transcript of “Tom O'Bryan and Daniel Moriarty:  
Hacking Adaptogens - #247”**

Bulletproof Radio podcast #247



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Dave: Hey everyone. It's Dave Asprey with Bulletproof Radio. Today's cool fact of the day is that within the next 100 years, scientists are predicting that grass pollen and allergens are going to increase by 202 percent due to climate change. That means, you're going to want to manage the inflammation you have. On top of that, if you live in a city already, the odds are that the people who do landscaping work have elected to put only male trees in instead of female trees. Female trees make a mess on your car, they spit out seedpods. Male trees, when there are no female trees around put out 10 times more pollen because they're trying to make the species survive. There's a good reason you have some of those sticky seedpods on your car because you probably sneeze less.

Today, we're going to talk on Bulletproof Radio with 2 internationally recognized experts in the field of adaptogens. One of them is someone you know already if you're a long time listener. It's my friend, Dr. Tom O'Brien. You've heard about him on the show before because we've had an amazing conversation about gluten sensitivity and how, really, it's not just for people who have celiac disease that there's really really substantial reasons to pay attention to gluten in your diet even if you don't have celiac disease. Tom has been on national media about this and has manufactured some supplements in that space. You'll also find him running the Gluten Free Summit. He's a well-known guy. He was just on the doctors.com.

Today though, we're not going to be talking about gluten nearly as much as you might expect because we're going to be talking about adaptogens which are an herbal blend. I've taken adaptogens for about 15 years now. It's an herbal blend that help you to manage stress. Our expert on the show along with Tom is Dan Moriarty. Dan is the founder of Sun Horse Energy, an adaptogen herb company. Dan studies adaptogenic herbs all over the world from the Alaskan wilderness all the way down to the jungles of South America. He spent about 40 years doing this and putting together blends. He's one of those guys whose entire life has been around, "What do I do with adaptogens? What do I do with herbs? How do we use those to upgrade human performance?"

I've had a chance to sit down with Dan and chat about this stuff a couple of times. I've used a couple of the different formulas that he has put together and they're a really good adaptogen formulas. I have him on to just introduce the concept of adaptogens to you as you're driving your cars, as you're listening today because these are something that belong in your stack of performance-enhancing supplements. In a nutshell, for someone who doesn't know what an adaptogenic herb is, what are adaptogens or what do they do?

Dan: If you want to hear a little history about this, it's quite interesting and it leads to the question. Counting over 70 years ago now, if you start adding up the years, a fellow by the name of Nikolai Lazarov in Russia under contract from the Russian Government, he has to find endemic. That means, species that are existing in their land, endemic plants that would lend a sort of resistance and some factor to their military and also, to their heavy hard workers force that they have. Mr. Lazarov went about trying to do this. Dave, he started with a known herb. He started with ginseng. Now ginseng, of course, we all know now is an adaptogen but Nikolai Lazarov did not know what an adaptogen was. A matter of fact, he's the one that coined the term after discovering what the properties were. In this effort that he put forth, he tested ginseng with real people. They don't test with rats, Dave, in Russia. They got plenty of people. They say, I need 50 people over here. I need 50 people-

Dave: Yeah. They have prisoners for that, right?

Dan: They just got human study drive from the get-go. They put 50 people on ginseng and the other 50, of course, placebo and then they work them to failure. Now, I'm not going to go into what failure represents here just because we're listeners. Let's put it this way, they work them hard.

Dave: Crushing rocks kind of thing?

Dan: It was very extreme. Lo and behold, the people on ginseng which, once again, is a famous adaptogen, the people on the ginseng, they were able to not only survive it but actually maintain their condition under really debilitating conditions. Now that this has been established, Mr. Lazarov started to look in Russia for something that could do this because Russia

did not control the ginseng supply. They were looking for endemic herbs that they actually controlled within their sphere. He started to go north. He looked all around. He absolutely had to talk to any head research with him. He had to talk to indigenous peoples. What he came across was a plant called eleuthero senticosus which, now, is called Siberian ginseng. He came across that one first. What he did was the same thing; 50 workers and this guy, once again, no rats here, these are real people. 50 people on Siberian ginseng and 50 people on a placebo and lo and behold, the same effect. The effect was that they were able to withstand the stresses and rigors that this test engendered on them. Now, he goes, "Wow, I've got something here". Now, the government was happy. They go, "Great job, Nikolai. Now, find another one".

Let me say something Dave, the class of herbs represented by adaptogens is very rare. Only 1 has been estimated in 10,000 beneficial plants that can actually fit the definition of adaptogens. Nikolai had a big job here. He is now searching around Russia for some other plant that's endemic to Russia. Amazingly, which a lot of botanist find this amazing, he finds another one. He finds rhodiola rosea and that's an amazing adaptogen in it of itself. The bottom line Dave, we'll go into the definitions. Mr. Lazarov actually coined the term adaptogen and then came up with three definitive definitional carts and I'll try to say this quite simply.

The first one, right off the bat, is that they're safe. They don't hurt anybody. They're non-toxic. What that means for all the listeners out there is that barring allergic reactions which anybody could be allergic to anything. Other than that, they're basically very very safe and you can eat them and don't have any problems across a broad spectrum of people and going to have great effects, non-toxic. For the second thing, this is very interesting Dave, is that adaptogens have been known and discovered especially since the 70 years has went by with the increases in technology and the ability to find out the actual workings of it. Adaptogens work at the cellular level. This is extremely critical because all of our listeners know this, we're made of cells. Anything that can affect the cellular integrity and functional cellular enhancement is what adaptogens would have to say ... We would have to say that's what they do. At the cellular level, they help the cells themselves. That's the

foundation of our whole physiology with stress no matter where the stress is coming from. The third thing, there's one other thing that has to be there to be an actual adaptogen is, they have to act in a way that harmonizes or balances the system of human physiology.

To make it easy to understand, just imagine an orchestra. You have a conductor; he brings one section up, he brings another section down. What's the purpose? It's to give the listener a better experience without the conductor who just don't get that. With adaptogens, it's the same thing. For all the people listening out there, what they would serve to do in our physiology is that they will help us to stay balanced, to stay harmonious, all our organ systems work together, our brain chemistry will start to become more integrated with everything that we do and the net effect, Dave, is that adaptogens help us feel fantastic. I mean, you know whatever a good day feels like, whatever that is, it varies from person to person of course. Whatever that feels like, that is the feeling that you will get when you put adaptogens in that class of verge into your existence.

**Dave:** One of the ways that I have described adaptogens, it goes back, actually, to the Chinese side of adaptogen research. I agree that the Russians have done some of my cool stuff. The older use of ginseng ... In fact, I think the first recorded use that I know of but who knows maybe ayurveda before that but I think we're getting back thousands of years is around the Chinese ginseng. They were using this in military situations. They give it to the soldiers before battle so that the soldiers could manage the stress levels better. You can go into your, essentially, fight or flight mode, into your adrenal response. You can do what you need to do whether it's to handle a stressful day or whether it's like, God and have a war, but then you can turn off the stress when you're done. Like, your ability to control your organ states and your state of arousal becomes more fine-tuned. Is that accurate from the way you've experienced working with adaptogens?

**Dan:** It is. If you think of adaptogens just by the word, it's to adapt and to adapt to the stress. If your stress is stress, that's everyday living and raising the kids and taking them to school, that's one level of stress. If the stress is going into battle, that's another level of stress. That's a

higher demand but it's another level of stress. What happens with adaptogens is, they keep you calm in the midst of responding to the stress of your life. It's not a stimulant. Stimulants like caffeine or nicotine and there's great value in those but they're a stimulant and when it goes up it has to come down. Adaptogens help you to address the stress of your life the same way more comprehensively and that they don't jack you up. They just bring you up and they keep you there for hours and hours and hours. You don't have that mid afternoon crash anymore. You don't need to go to sleep after you've been working hard all day, that you've got some reserves with you.

Dave: Absolutely true.

Dan: As you mentioned, the Chinese and their traditional use of ginseng which is Panax ginseng, if you look at other indigenous cultures which I've studied, you will find that in most cases, Dave, the healthy people, the people that maintain the culture and their actual physical health as a group, you'll find that many of these healthy cultures have access to that class of herbs known as adaptogens in their diet. There's an interesting story, a recent one, which the plant does not appear in the ancient Chinese medica which goes back as you mentioned, 2000 years ago and that's jiaogulan.

Jiaogulan is very interesting. I studied it over 20 years ago. Recently, it came under heavy inspection by the Chinese government because they has what they call longevity pocket in Hunan with the Miao people. They noticed that there was an inordinate number of centenarians, people living over 100 years there so they decided to look into it. The people there had another amazing word that denoted something. When the children of these Miao people would leave the area and go to the cities and would be gone for 8 or 10 years, let's say, they would come back to visit their parents and lo and behold, they would look more aged than their parents. They had a term for this. It was quite impressive really. The government looked into it and they discovered that this is also known as gynostemma pentaphyllum and that's the actual botanical name.



Now, ginseng has about 23 of these elements, phytonutrients called ginsenosides. The jiaogulan or gynostemma has over 80. It's incredibly powerful. That was what was enabling these people ... The Miao people that lived in this very remote area, very culturally intact people in China, that's what enabled them to have this longevity and they look, actually, better than their children. Interestingly, look at the scientific aspect of this, Dave, when the kids would leave this area, they would lose connection with this natural resource and they wouldn't have this stuff anywhere else they went and they would decline quickly. It wasn't a genetic superiority or any kind of genetic thing that enabled them to live this 100 years in general. It was the fact that they were continually supplying their bodies and their minds with these ginsenosides which are represented quite nicely and in that plant and also, in the class of adaptogens.

Dave: What are some of the other adaptogenic herbs that people probably haven't heard of but that are really important to know about?

Dan: Let me grab a bottle of products here and put my glasses on. I need them when I look at real small stuff. Let's talk about a couple of things. I just mentioned jiaogulan which I will tell you is absolutely fantastic. There's another one that I like quite a bit. It's called erythroxyllum vacciniifolium. It is a South American herb. It's used in the Shamanic medicines down there. It's used by a lot of people in the indigenous world. There's many different tribes like the Jhabua, the Yanomami. These were people that use this herb quite a bit. In the native language, it's called, "What gives power to the person" or "What gives power to the Indian". It's been translated a couple different ways. It's quite amazing.

When I was down there, I was eating malaria pills, for example. These little strips and I hate bugs, I got to tell you. I want to test someone but I don't like bugs at all and I've spent my left time around where I know I really don't like them. I'm eating malaria pills, I've got long sleeve, I've got mosquito repellent on. I'm still getting bit. It's not helping so I'm eating the pills. I'm looking at these people that I'm with, Dave, and they have virtually no clothes on and I can see mosquitoes biting them. I asked the guy because they don't speak Portuguese very well and the



install was able to translate. "Why don't these guys get malaria because they're still going? That's impossible. It's a blood parasite. They have to have it." "No, no, they don't get it." I'm like, "Okay. That's interesting. I don't believe that."

I start questioning these little fellas and it's not easy to do that because I'm a doubled language barrier apart. I finally show them my little malaria pills. I offered it to them, they don't take it. I tried again and they start laughing, pretty funny. Next thing you know, I'm like, "What do you got? Give me something." They take me off into the woods and they show me this plant. We start peeling off pieces of it. I taste it. It's more bitter than quinine. It was quite amazing. Lo and behold, that is what they use to keep them from suffering the effects of malaria. It turns out that they actually do have the malaria parasite, they just don't get sick.

Dave: They adapt.

Dan: They adapt. The mosquitoes are injecting them with the malaria parasite. It's going through its normal cycle. Any of us would become ill, they don't get ill. They have adapted to it. Once again, this is what has helped people around the world adapt to very difficult conditions and one that would stifle any modern person. In reality, what we have here in our life is that we've created a world that we have not adapted to. We have a total unrelenting excipient stress on our bodies at all times and it translates into stress all the time. We need what they have. We need what they've used. We need to be able to adapt to the world that we've created.

Dave: That was a couple of them. What are some other ones? Talk about the story behind some of the ingredients that you put together in Sun Horse because I know you've researched them so well and a lot of people listening to this are not familiar with adaptogens at all but the idea that all these different traditions have come up with something that works in their native environment and that you've been able to blend these from different areas.

Dan: Absolutely.

- Dave: It's pretty interesting. Tell me about a couple more of these things because I'm actually kind of fascinated.
- Dan: I'll start with one. There is an herb that we have in here. The native term for it is, "She of 100 husbands". That's how they referred to it.
- Dave: Sounds pretty good.
- Dan: It does actually, doesn't it? That herb is a major ingredient of why women feel so great and our female product is that it tonifies their reproductive systems and I've done a few studies on this. If the person happens to be too high with estrogen, they tend to start coming down to normal range. If they tend to be too low, they start coming back up into normal ranges. It brings balance. It helps them adapt and they have more vigor, they have more vitality. It's gotten to the point to where sometimes the husbands come up to us and say, "Don't ever let my wife be without this". They're quite aggressive about it because it's just a marvelous change.
- Tom: The way I like to look at it is, it gives a woman the ability to put up with 100 husbands.
- Dan: It's a pretty amazing ability but Tom is right. Another one, since we're talking about the various plants, I would like to mention astragalus which I find very very interesting because science now, they're scanning. They use these scans. They're looking for phytonutrients and active ingredients which they can ... In the drug companies, what they'll do is, they'll use this. In many cases, they'll make a synthetic analogue or something and of course, that's how a lot of our drugs come along. Astragalus is the only, that I know of, natural substance that contains what they call cycloastragenol. Now, this is amazing because cycloastragenol has been shown in various studies which I invite any listeners to look that up to actually lengthen the telomeres and of course, the telomeres are a little tail-like structures on the end of our chromosomes that when this items as the cell divides, each time a telomere loses a little bit of length and when it gets to a certain short length, that cell dies. You can no longer maintain its viability.

Astragalus, in the traditional medicines have always had this ability to impart extra vigor, extra length of time longevity and now, science, of course, we have these amazing technologies that are actually showing how these herbs really work. People should take very careful interest in this because the thing to remember is that this medicine that represents herbal medicines and adaptogens and things like that, this has been healthcare for the human race for thousands of years. Our modern medicine system is really only a couple 100 years old. We need to take a broad look at this because we're a whole being, we're not just a collection of parts and adaptogens help us as a complete being. It really does make a difference in our life.

Dave: When you just talked about the extract of astragalus, that's one of the main active ingredients. It's something called TA-65 and we've had to guess. I'm going to talk about TA-65.

Dan: Absolutely.

Dave: I take about 200 mg a day of cycloastragenol which I think it takes about 100 pounds of astragalus to make.

Tom: It does.

Dave: Because of the studies about telomeres so it seems like that's a good thing to do. It's kind of a pricey way to do it but it's one of those things where how much is an extra few years or an extra few dozen years of quality life worth.

Dan: Quality life. Yeah.

Dave: Yeah, it's quite a worth an investment in my mind. As I become more successful, even when I was 18, I started. "What can I do? Should I take my vitamin C?" As I became more successful, I was willing to invest more in things that are likely to have very long term results instead of buying a faster car or something.

Dan: Good idea.

Dave: That's a good investment, I think.

Dan: I'm really excited, Dave, that you've given Dr. Tom and I this opportunity to talk about such a really beneficial subject. I mean, I don't know how many people hear these things. I can tell you one thing, this is very important because in our world, we need to do what we can. You talked about the cost of cycloastragenol, it's a deal no matter what it cost because look at the alternative. I mean, we don't want to go down to where we have to rely on the medicine of modern medicine to just help us feel good. We really don't want to.

The way I look at it, Dave, is like this and because of years ... I have to tell you, I was raised by an herbalist mother, a Hungarian herbalist whose mother was also an herbalist. I'm the only male herbalist that anybody knows our family. That's just the way it worked out. The way it really is is that we've been going down as ... I say we as the United States and people of modern, other first world countries, we're going down a railroad track, Dave. We're born right here at the beginning and of course, we know what the other end is. That's kind of the end of the line, right? It's not a real pleasant right. We're looking at a lot of wasteland off both sides as we get older because of just the way that our society and our nutrition and all these other factors just adding up. What we're trying to do here with our listeners, Dave, is talking about these adaptogens and try to encourage people to put them into their lives. It's like grabbing a switch and I really feel that you and I and Dr. Tom are all hanging onto this thing and we're pulling that track, onto a different track. That's the thing. It's an adventure.

I will tell you, I have spent 40 years looking into this; researching native peoples and the products that they use, natural plants. It never gets boring. When you feel these things in your system, you never get tired of it and you see the smile on people's faces and they come up to you and they're so excited because they actually have something that really works. They can feel it. In this world, a lot of the products we get are just filtered. There's so many things like technology and finances and there's all these different formulas that have to be met by business before the American people and other first world people ever get a product. Here, we have something that's pretty much a direct shot. It's like a little guy from another world coming and giving us modern people a gift that we really need. They could see the meaning. It has to be reciprocal. I believe

in the mission of Sun Horses to actually make the circle. We have to give back as well as take. That's another story.

Dave: One of the core principles behind a bold roof is that stress is stress and there's beneficial stress and there's useless stress. They have kind of the same effect on your biology. Whether this stress is irritating sounds that work from an exhaust fan that's just strumming. You're not aware of it but at the end of the day, your cortisol is 3 percent higher. It's just something you just didn't feel good about that. It was stress that didn't do anything for you. You might think, just man up and take it. Bottom line is, you paid that stress. It didn't do anything and you had to deal with it. If you can use some herbs that make the impact of that basically, invisible stressor lower on your body, what are you going to do with the extra stress you can handle now and that's why I've been taking these kinds of things for 15 years because adaptogens let you deal with all those weird stressors. Not to mention, when your boss comes in and says things like, "You're fired". There's other bigger stressors in life that happen.

Basically, if you would have the ability to bring it no matter what life brings you, you ought to be managing useless stress and making sure that you can handle overall more stress and then cutting out the more useless types of stress and then consciously applying stress that causes your body to adapt in a positive way. We call that exercise. We call that challenging your brain. We call that things like, oxidative therapies which you may use ozone that we've talked about on the show before. All of those things are stress, adaptation versus distress, get ground and into the dirt kind of stress. That's why I think adaptogens are really important and that's why they're on my top 10 list of things you can do to perform better than you and otherwise do.

Dan: Dave, you're absolutely right. Hans Selye started writing about this back in the late 40's and there was eustress, E-U-S-T-R-E-S-S and distress. They're both stress that your body responds similarly to both of them. What adaptogens do is, they help you convert the distress of life to new stress that your body can adapt with and that it can handle it better, whatever the stress is. It's very true and something that I've noticed over the years and it's pretty impressive, really.

I do martial arts. It's one of my great lux in life and I teach Jiu-Jitsu and I do judo. Occasionally, it gets a bit rough and I got head-butted. It's about 6 months ago now. That's the stitches here above my left eye and in teaching a class. It was a student that just head-butted me. He didn't mean to do it but nonetheless stitch is necessary. I go to get stitched up and the fellow after doing this says, "Okay, your eye is going to be all swollen tomorrow and black and this and that. We expect that. Don't worry. You might even want to put a cloth over or something because it could look pretty ugly and lump". I got home and I took our product and simply just put it on my hand tapped it on there lightly where the stitches were of course. I put it on there as best as I could and just went to sleep. The next morning, I had to see Dr. Tom and I think he could tell you and even everybody in the company was pretty impressed.

Tom: I saw Dan and I looked at him and I said, "What did you do to your eye a few days ago?" Because he had the black and blue shiner but it was already as if it was three days old.

Dave: Wow.

Tom: I didn't recall seeing a shiner on him two days earlier. I said, "What happened to you? I missed it." He said, "It just happened yesterday".

Dan: I had to go back to the doctor also for a checkup after a few days and the guy left away. He really, actually, was just amazed of the fact that the damage was so minimal compared to what he had saw. Things like that-

Tom: That's what these herbs do.

Dan: Yes.

Tom: That's what adaptogens do to your adrenal glands or to your thyroid or to the myelin that covers your brain cells, the sheath that protects your nerves. When you adapt you regenerate. You help your body to regenerate and when you take multiple adaptogens, formulas that have been put together so masterfully as these have, then it's systemic. It doesn't matter what tissue of your body needs some distressing support. You will be able to get it with these adaptogens.



Dan: Absolutely. You were quite right, Dave, in mentioning how the Japanese and Chinese that had access to ginseng use it in battle. Of course, I don't really think you could get much more stress than hand to hand combat with each weapons.

Dave: Right.

Dan: That's pretty stressful. To be able to detune and go drink some sake afterwards, that's really taking it to an extreme. The bottom line is that, adaptogens, they do help us at the cellular level. That's the whole reason why this worked because by not really focusing on a specific thing. In other words, adaptogens are non-specific. They help us at the cellular level. By not trying to affect anything in particular, we wind up affecting everything and that's exactly what we're looking for. We are whole people and our bodies amazingly know what to do.

When we give our bodies the proper resources, it's like giving a general contractor his truck and his tools and his helper. If you hire a contractor to build a house and he shows up on the day to build and he has no truck, no tools, no helper, he knows how to build a house and he just didn't have anything with him. It's going to take a while to get that place built. If the guy shows up prepared; truck, tools, helper and everything he needs, it going to go together well. Our body is just like that contractor. Our body knows how to heal. It does. It's intrinsic in how we are. We're successful humans. It knows what to do. When we give it, the cellular enhances these cellular resources and the harmonic balancing that takes place with adaptogens, now, we're giving our cells the tools that they need at the foundation level of our existence to really make a better life for ourselves right from the get-go.

Dave: This is a pretty big kind of sweeping statements. What are the specific studies that tell us that adaptogens work? How do we actually know? What are they measuring other than Russian prisoner's ability to break rocks or a rat's ability to swim?

Dan: Absolutely a great question.

Dave: Give me some science here.



Dan: I'll give you some. More recent. Let's get away from Nikolai Lazarov and Israel Brekhman and their initial studies. Let's go flash forward to about 2008, 2009. Two scientists by the name of Panossian and Wikman who are well afforded on this subject, they looked at the way that adaptogens work. Their statements are quite revealing. They find that adaptogens act like ... Let's put it this way, if stress was a virus then adaptogens would be the vaccine and this is at the subtle level. That's just an analogy. Really, the bottom line is, these adaptogens in some way bolster ourselves ability to handle stress no matter where the stresses are coming from. Dr. Tom, I might go into this a little deeper but we've actually had preliminary studies by reputable labs that show that that's exactly what happens. We've done our own study. Not only that Panossian or Wikman do this, which I invite everybody to look up, those are some great studies. I think it's 2009. They state the adaptogenic effects quite simply.

Also, we're looking at the toxicology studies on neuromitochondria which is in our neural cells. Basically, nerve cells, brain cells and the application of the adaptogens really enabled these neural cells to withstand very very high levels of toxicity, much higher than it could without it. It's quite interesting. It's very consistent, these effects, when you apply adaptogens.

Dave: Definitely, an increase in ability to handle neurotoxins. That's pretty useful. The first one, virus, vaccines, that didn't sound like a scientific study like resource or something.

Dan: It was an analogy.

Dave: Yeah, I know.

Dan: What was stated.

Dave: What did it actually say versus the analogy? Because I know a lot of the listeners are ... What did they measure in that study?

Dan: It actually used the term inoculate. It was used even in the description that Panossian used.

Dave: Stress inoculation. Okay.

Dan: Yeah. He said it's like a stress inoculation. Of course, it's not an actual inoculation. I took it to the virus part.

Dave: Sure.

Dan: Panossian said that it basically acts like, I'll try to quote it as best as I could remember, that the adaptogens act like a vaccine to the cells and they bring them to withstand stress at much higher levels no matter what the source of the stress is from.

Dave: Tom, maybe, how were they measuring cellular stress? How do we know whether a cell is stressed? We know if a person is stressed but I don't know if a cell is stressed and how do we measure a difference after you take adaptogens?

Tom: Yeah, I understand the question. I did a study of our products with 28 people and one of the things we did or one of the markers we looked at is called a multiple symptom questionnaire. It comes from being super functional medicine. It's been used for about 20, 25 years. Tens of thousands of people and doctors have used it, lots and lots of people. It goes through a symptom of complex. How do you feel in this area? It's 2 pages of questions and then you get a score. The goal is to be below 20. Most people are between 60, 80. If you're over 100, you're feeling pretty low. We started that at the beginning of a study and then we gave all women Thrivagen.

Dave: I think my wife, Dr. Lana was part of that study, if I remember, right? If I recall.

Tom: That's exactly right, she was.

Dave: I'm not sure if she was officially in the study. Cool.

Tom: That's exactly right. We gave them the product for 2 months and then we gave them the MSQ at the end of the study along with the hormone studies to compare testosterone, estrogen, progesterone, and all of that. We gave them the MSQ. Overall, it's called general well-being. Overall.

How did you feel at the beginning and they had their score, and how do you feel at the end, 2 months later. It was a 47 percent reduction across the board in every category of symptoms; energy, sleep, bowel habits, vitality, thyroid function, cognitive function. 47 percent across the board improvement in everything.

Dave: That's a big number.

Tom: Forty-seven percent and that's huge. Not just in one system of the body. What they found, once again, more than 47 percent in that particular category of premenopausal symptoms, every woman reported improvement across the board in all of her symptoms that she was suffering in that category. 47 percent across the board and hormone-related symptoms, every person improved.

Dan: Very good. Dave, we're all looking for performance. That's what we want. I mean, because many of us are not sick. Let's hope we were not all suffering in some way but we all want to get more out of life. We want performance. We want to get the most we possibly can. A little bit of research you might say but this is in the real world, the Russians, a field in a team at the Lillehammer Olympics and they gave one team adaptogens, one of their own teams and all their other teams did not have adaptogens. What happened? Interestingly enough, that team that got the adaptogens won 9 gold medals, if my memory serves me right, and none of the other teams that they feel didn't even won a gold medal. That was a very striking representation of what adaptogens can do. Later on, in the Chinese Olympics, the Chinese runners were also given an adaptogen, very very powerful herbal adaptogens and they were able to exceed almost anybody's expectations in the distance strike.

When it comes to performance and then Dr. Tom and I have run some very interesting studies with power lifting. We don't have a way to get it on the screen or anything right now but it's impressive. In 6 weeks, people that are already in shape, the kind of experience they have and the actual physicality of things. You see the change in how their muscles are, they're cut better, they're able to do much more in the workouts. We have one muscle testing study where the guy could jump straight up and match individually someone jumping straight up and he could get a

little higher than his knees, about 4 to 5 inches higher than his knees. It was as high as he could jump up on a platform. He's a pretty strong buff looking guy. After 6 weeks of adaptogen, Sun Horse have many adaptogens, basically, 6 weeks of the product and then he does this test again and he's jumping clear up to his chest, I'm not kidding you, straight up. Not once but repetitive times. It's really impressive.

I have to tell you from personal experience that when you train, you workout, you do martial arts especially when you're competing and I competed in the Panamerican judo. Judo is a rough sport and you take a lot of damage at judo. The soreness without the adaptogens, honestly, the soreness I would stay sore, I couldn't get away from the soreness. I was training sore, working out sore. Once when I add the adaptogens, it's hard to get sore. That's a big difference.

Dave: That's pretty big effects, no doubt about it. What about people on medication? I mean, there's a liver clearance when you take adaptogens like herbs, you got to filter these things out like any other kind of supplements. What if you're taking all these handfuls of medications that a lot of people, particularly in the west, are on?

Dan: That's really a good question and we kind of learned on the job on this one because in the medical literature, there's nothing in terms of potential complications with taking adaptogenic herbs. What we discovered, we had a 44-year-old guy who has congestive heart failure and because of that, he was on a blood thinner called Coumadin, a very famous drug.

Dave: Yeah, rat poison. That one, warfarin.

Dan: That one, you bet. He was having his blood checked every week to make sure that his Coumadin levels were right where his cardiologist wanted them to be. He had been doing that for two or three months. I don't recall how many months, but every week having his blood drawn. We gave him a Sun Horse to take and in 2 weeks his Coumadin level was zero. It was zero and that's because some of these herbs help your liver to detox better. It helps your liver to function better. Your liver was trying to get rid of this toxic rod that was protecting his life and so he

had to dial down way way back on the adaptogens and take miniscule doses and still check his blood work every week. I know it's fine but because of that, now, we have to give a caveat which is, "Be careful. If you're on medications, check with your doctor and confirm that the dosaging is still correct for you". There's no blending that makes a drug toxic. The potential complication is that, your body is going to work better to detox and get rid of the stuff that it really doesn't want.

Tom: Right. One other mention is that if a person is on drugs that would suppress their immune system, I would highly recommend them talking to, of course, just any serious medication doctor before you take any herbs at all. I'm not talking of adaptogens. If you're on herbs that suppress your immune system, you definitely want to talk to your doctor because adaptogen, basically, what they'll do is, they generally will help bolster your immune system and that may be counter indicated in people who have had organ transplants or something like that.

Dave: We both are southern manufacturers. I mean, I have an adaptogen blend that we blend in coffee in the coffee shop and all kinds of other stuff. I'd say the same thing, "Talk to your doctor". Tom, you're a doctor. When the average person talks to the average doctor, it says, "Should I take herbs?" What's the average doctor going to say?

Tom: The average doctor is going to say, "Don't mess with it".

Dave: Yeah, "They don't work" is what they're going to say, right?

Tom: Yeah.

Dave: What are we supposed to do? We are legally required to say, "Talk to your doctor before you blow your nose," right? Otherwise, you can sue the pants off of us and that's the world we live in and it sucks.

Tom: Yeah.

Dave: You and I and all three of us are not legally allowed to say some things about what our stuff does because those are considered drug claims.

Tom: Absolutely.

Dave: We're guilty. I've had people with licenses tell me, "You are no longer in the era of free speech. You're in the era of controlled speech". I mean, I can't say what the stuff does and so we'll go dancing around what some of our things do because we're not allowed to actually say what it does.

Dan: I have to say things like, 47 percent improvement across the board.

Tom: Right.

Dave: Yeah.

Dan: People felt better, people report feeling better and you can't say that their thyroid is functioning better, that their ovaries are functioning better. You can say those kind of things.

Tom: Dave, fortunately, there's thousands of medical papers all around the world done by various different countries, not just America, that talk about adaptogenic herbs and the responses and effects. Unfortunately, we can't just tell people to do a little research there and they'll really be impressed. That's what I'll recommend. Yeah.

Dave: Anyone I would say is capable of Googling or whatever they're trying to work on and adaptogen is saying, "There's a lot of research," and the same goes for a lot of the stuff. Unfortunately, the internet has leveled this problem where people who are the biggest experts who put life savings and to making things happen aren't allowed to say what happens without very careful guidelines. It's really rough.

My dad, 10 years ago, had a heart attack. If you went into his cardiologist and say, "I'm looking in taking some adaptogenic herbs," they're going to say, "We didn't know what that is" and they're going to open the PDR, the physician's desk reference, and they're look in there, "There's no entry for that" and so the answer is, "We don't know." Where is this word cycle? Or we say, "Ask your doctor". The doctor is like, "I don't know. Probably, it doesn't work because I haven't seen anything in the British Medical Journal in the last week about it." What would you recommend that people do who are interested in this? If they

do talk to the doctor are going to get nothing from their doctor. What's the best course of action?

Tom: The bottom line?

Dave: Yeah.

Tom: The bottom line is that our health care system doesn't work. The US is ranked number 2 in quality of overall health. Number 2, second from the bottom out of 53 industrialized countries. Second from the bottom. The system doesn't work. For the first time in the history of the human species, children born today have a shorter expected life span than their parents. They're going to get diseases earlier, get sick earlier, suffer earlier, and die earlier than their parents. That's the statistics, unless we all take more ownership of taking care of ourselves.

Dave: Absolutely.

Tom: If we go back to history, if we go back to what the indigenous peoples do, how come these tribe down in the Amazon doesn't get malaria and they're getting bit and they check their blood and yeah, they've got malaria in their blood, how come they don't get sick? It's because they've learned to adapt. There's a whole concept that our culture just as not embraced and that is living a balanced life. We don't live balanced lives. We live in a zoom zoom laser laying life. Most of us are driving on the highway of light in second gear floored and what you have to learn to do by things like Podcast and health interviews and read a little on your own is, you have to learn how to shift into fifth gear cruising.

Dave: That's right.

Tom: You still can go faster but not burn your body out. The world of adaptogens is one of the safest places you can look.

Dave: Absolutely.

Tom: The first tenet is, they do no harm. That's the first tenet.



Dan: Their non-toxic aspect. Dave, I mentioned that just real briefly that I was raised by a mother who was a Hungarian herbalist and I saw, firsthand, when I was young and not that every kid becomes what the parents do but I just happen to. The bottom line is this, I watched them over and over again, women come to my mother and just in need of something. As a young man, I didn't understand women's problems of course but I know one thing, that she was able to help them a lot. When they could not get help in the standard medical world and I just was raised in a home where this was a regular thing.

As a family, we have connections down at Colima, Mexico where my mom's Hungarian relatives settled after when Hitler kicked all of them trying to get pretty much try to rule the world but a lot of Hungarian people left and lived down in Colima, Mexico. We have a family down there. My 2 brothers are born in Mexico, my daughter was born in Mexico and my mom has 40 hectares of land down there in Huiscolote down in Colima. What I was impressed was, when she was in the jungle environment as an herbalist, she was very quickly, within a year or two at the very most, able to incorporate these tropical herbs that as an Eastern European herbalist she had never been experienced with. There was a way that she had a feeling and understanding and listening and taking information about herbs and being able to help those even the people that lived there that were natives to that area.

Dave, you just have to encourage your listeners and we do encourage people like Dr. Tom said, that take a personal interest in their own health, adaptogens are the class of herbs that I chose myself to spend because you can't know everything about herbs. It's just impossible. I focused on the class of adaptogens. Under my mom's tutelage, it took one year to know one herb under five different categories that I had to basically assign a value to. This was part of our family way doing this. The herbs that I've used have taken me many many years to actually know. You don't know one herb until you work with that herb particularly for a whole year under a number of different conditions. What I'm trying to say here is that people today, they need this information. It's not gone. It's not lost but you do have to look for it. I'm really happy that all approves, takes an interest in this and wants to do this.

It's a big job, Dave. I mean, I really feel so happy to know there's a fellow out there that shares a vision like this of impacting people's lives as such a basic level. I think, to me, it just made my whole year. I mean, Sun Horse, our vision is to help people. I can easily see that's your vision and I'm just excited to be able to talk to everybody about this. Our products, to me, is like my life in a bottle, pretty much. That's what I have to say and it works. Every day of every week of every month of every year, I work with this and see it firsthand what these herbs could do for people. I know that when people try, they're going to feel something good. They're going to enjoy it because there is really not a downside that I've seen over thousands of different people and I see so many upsides that you would actually be negligent not to recommend this to almost everybody you know, I believe.

Dave: I think I get it and we're still beginning to push back from people saying like, "Drug interactions," or things like that and "How do I know it's safe?" and basically, your answer to that is that these things are safe in general but you still should ask your doctor which is a bit of an oxymoron there.

Dan: Right.

Dave: I think people understand the spirit of that. The other big question, I haven't seen conclusive research about ... You guys know I wrote The Better Baby Book. It really exhaustively researched a thing about what can you do before and during pregnancy to have kids who were going to live longer than you, kids who were healthier than you and probably smarter than you? It's what I did for my own kids. I didn't find convincing evidence around adaptogens that said safe or not safe. In fact, most will say not say during pregnancy. Not because they're not safe but because the manufacturers are afraid of getting sued if something bad happens. Those sort of things that are perfectly okay to do that say not to do out of the precautionary principle. What's your take on adaptogens? I mean, you're already talking about manipulating women's hormones with Thrivagen and certainly, Lana saw some effects from that. What's your take if you were expecting to get pregnant? If they're pregnant, what do they do with adaptogens?

- Dan: You're absolutely right and the only way that you can say something that you take in as safe for children is if you do studies with children. I don't know that any of the herbal companies are going to spend 2 or 3 million dollars to check their herbs out against kids which is why you don't have studies of herbs and kids that showed they're safe. In order to claim something to be safe, you have to prove it conclusively and that just takes mega dollars to do. I think that's the bottom line of why you see that and so you don't really know. The studies haven't been done to show that they're safe in kids. Now, for me and my children, what I would do is, I'd go back and look at the indigenous people.
- Dave: Yes.
- Tom: That's exactly right.
- Dan: Did they give them to the kids?
- Dave: Did they?
- Tom: That's exactly what I was going to mention.
- Dan: Absolutely.
- Dave: Yeah.
- Dan: The Guarani are famous down in South America and if anybody ever saw the movie, Mission, with Robert De Niro, I believe, that talked and showed their plight, the Guarani Indians and they're amazing people. I don't think there's a single Guarani who's not an herbalist. They all are herbalist to some extent. Their herb masters are incredible. They know what's good for people and what's not in their world. Their younger people, they all take these herbs. What I've seen is, not babies as in still nursing. They eat what the parents eat. They just don't need as much. Obviously, they're not eating big amounts and they don't have any chronic conditions to deal with. They're not getting all the medicinal things that the herbalist could do for a condition of an older tribe member there. The kids do eat the adaptogens. It is the paullinia cupana which is ... They're named after that. The Guarani, they're named after Guarana.

After going to Brazil, their whole culture is different in our ... There's a different vibration. The only way I can explain this, Dave, and this is something that goes to the heart of the heart of how I formulate herbs is about vibrational. When you go to Brazil and you are around these people. You're immediately impressed with their energy.

Tom: Their vigor.

Dan: Their drive for life and their vigor. They work all day making very little money like most people do and then when they get done, they go to the gym and they work out and then they go out and they have a couple beers and you're lucky to get to bed by 1:00 down. I'm not kidding you. I had to adjust to that. These people go. Why is that? Because they all, to some extent, take at least one more products with the Guarana which is paullinia cupana and in many of these cases, it's the whole plant, the whole pot. Not just an extract. They don't just get the caffeine-like isolate out of it. They try to use the whole pot which in any of the herbs, this is important for listeners to understand is that for herbs to be as safe as they are, you want to use them in this natural form. Meaning, use the whole element as much as possible because there's many ingredients above and below that buffer out the particular active ingredient that you might be aware of. These buffering agents are really really important. That's why chemical medicine has so many of these disclaimers since we're talking about medical and the stuff we have to do and say, "Talk to your doctor".

If you ever saw this kind of medicine where you're trying to cure acne and you can have liver failure and death and some other things as side effects, I mean, come on, you got a pimple and the side effect is, maybe, liver failure. What we're saying is that the herbs, they have these balancing factors and that's why in the formulations, we try to keep that in there so that that's, number 1, we don't know everything and the way these plants are made, they convey the genetic information these plants bring to our cells is like a little guy from the jungle coming to our cell, knocking on the door and saying, "Hey, you guys need to reboot. You need to up the energy cycle." The cell goes, "Hey, I've been doing the same thing for 10,000 years." No, no. You don't understand. There's a lot more stress out there. There's the big guys having trouble.

This information from the real world that adaptogenic plants have had to be in the actual atmosphere and around the actual specs of this planet, they convey information to ourselves, Dave, and that information allows ourselves to reboot just like a computer to shut it down, reboot it, reboot to an appropriate energy setting which will allow us to then deal with our lives in a better way and that's what it feels like. I don't know how I was to say it.

Tom: I've got one example. I'll give you about this extract versus the whole plant and that is probably the most notorious food additive in our culture today is sugar. I think we've got a whole lot of agreement that white sugar is not very good for you especially in excess, right? What is white sugar? It's sucrose. It comes from sugar cane or a sugar base. Kids in the indigenous cultures where those plants grow, kids chew sugar cane all day long because it's really sweet. They never get cavities. They don't get cavities. Wait, it's sucrose. No, it's not. There's sucrose in there with all of the other compounds in the plant that balance it out. It doesn't have that same shock effect that the one crystalline extract from the plant sucrose has. That's the way it is with herbs, that you maintain the balance of the herbs.

Dave: It makes sense and that's one of experience as well. Taking drugs versus taking herbs. I tend to like the herbs and there's nothing wrong with taking drugs when the drugs work and when more natural ways don't work but I think if you put kind of full heart you did jump, first, into the drugs until you've explored nutritional and herbal and orthomolecular and functional medicine kind of things because if you're playing the odds, you're probably taking more risks with the drugs and there are some things like the Rasodan family. Drugs has been around for 50 years with well-known safety profiles that make your brain work better. Those are good. I'm down with that.

Dan: Those are good.

Dave: Those are the exception, not the rule. It's also true that some long held safe herbs actually aren't very safe. There were some that people have either misused or that we didn't quite understand, there are processing problems, there are huge issues I've ran across with purity. I looked at

creating a maca based product. Maca is something that can help you with your hormones for both men and women. I sourced like a very high-end maca. All the good looking stuff. When I went through the lab test, I found 13 parts per million of alpha toxin. The stuff was dried in a jungle where you're going to have humidity and things like that. That's, by the way, a lot of aflatoxin.

Aflatoxin is the most cancer causing compound known to humans. It is a mold toxin. Things like that, there's also issues with heavy metals from Chinese herbs that are pretty well known. That's one of the reasons that I would recommend people and pay attention to herbs, pay attention to adaptogens but also, pay attention to the quality of this because unfortunately, when it comes to supplements and things like that, you get what you pay for.

Dan: You really do.

Dave: Just because you pay a lot doesn't mean it's always going to be clean. If you're going for the most affordable option, the vast majority of the time is affordable because of its lower quality and that sucks. I think all three of us are working to fix that problem because of the world I want to live in. Everyone has access to super high end herbs that make them better humans. I think there's a little bit of a gap between where we are now and where we're going with that.

Tom: That's why we got together, Dan and I, is to change the planet. It's really is to change the planet and we will never compromise on the quality of our products ever.

Dan: Yeah. Sourcing is an area where we spend so much of our resource like you mentioned absolutely correctly. We test our product and we just start our most recent test, no detectable heavy metals in them. We really work at that and why would you want to take something where you're actually doing more harm than good. That would make no sense at all. Sourcing is always an issue and you have to verify it. The things that I've noticed in herbs also, a lot of this is because of the commercial world we live in to some extent but something that I think there's a mention is that when you go into a drug store and you pick up a little cup of an herb



or something like that, there will be anywhere for 100 mg or even 750 mg or something like that of the herb. If you go to a Chinese herbalist and you get a prescription, you can get a big plate about this big with maybe 100 grams of herbs on it. They'll tell you to make a tea out of it or stink up your house.

Tom: Put in a big pot of water and make a tea.

Dan: That's only one or two days worth.

Dave: It's shocking. If you've ever seen this, I think there's a video outside of this. They do a newspaper, a whole sheet of newspaper wrapped around with this weird seedpods and all of this, like crazy looking alien tentacles and oil it and it smells like crap.

Tom: Exactly. Grasshopper corpses.

Dan: That's like one day worth, Dave.

Dave: Right. Yeah.

Dan: As a formulator and somebody, I know you and I are on the same ... We're both grappling with these subjects all the time but when you think about this like you mentioned, this great big shocking pile of herbs, we want to make it simple. We want to make it easy. People in our world, they're pretty in a hurry, I would say and nobody wants to boil a bunch of stuff but you want it effective.

Dave: Did you guys take out the maple sugar or is that still in there?

Dan: No, the maple is still in there, Dave, and it's a good thing it is because that maple our cells have an affinity for. It also has an emulsifying factor to it which I like a lot. There's a lot of reasons I like it. It's a grade B which has a lot of mineral in it which is also good for us. We have to have a little bit. You can take it out and believe me, I have. I can drink it like that but I'll pretty much use the herbs.



- Tom: This is one reason why I still love working with Dan is because the initial formula had agave nectar in it because Dan thought that was a good healthy sweetener and I pointed out-
- Dan: It's less expensive too at the time but worked well.
- Tom: I pointed out that we can't do that because there are some side effects to agave nectar that's not as great as we would like to think.
- Dan: Yeah, the low glycemic index.
- Tom: Immediately, he started researching and now, all we use is organic grade B maple syrup. That's it.
- Dave: Got it.
- Tom: Which has a lot of health benefits in it of itself. It being a national product, being a sap and evaporated and then used since time began. Maybe Indians, if they used it that we pretty much learned how to do it from the American Indians. It's just that simple. In a formula like this, it's very complimentary and you can do a lot of research. I invite people to look up. People use maple syrup like that with a lot of different herbal preparations, even people that are doing the natural therapies like if they were ... Let's say they had a cancer problem and they go to some natural therapy site. They'll recommend carrying the cytotoxic element which would be herbal in some cases right to the cell and they use maple syrup to do it because the cell has this affinity for it. That's one thing that's very good in this formula. The point is, it's herbs anything for that matter. You have solubility then you have bioavailability and then you have bioactivity. They're kind of parallel and if you have no solubility, if your solubility is very low then your bioavailability is going to be low and of course, bioactivity would drop also.

From the formulating standpoint, we have to have these herbs in effective levels, in a form that our body can use at levels that it really needs and it has to have an effect and that's the thing about the formulations have to have a great bioactivity and that's what we have here. It's just really not ... It's nice to talk about it. It's nice to have the opportunity to have people understand it. There's very few sources out

there as you well know, Dave, that's why we're having this chat here. There's very few sources where people can go and get something high quality and I know you and I are on the same page or something. They rule out there with billions of people and if adaptogens are in any way ... If they impact people's lives in a personal level like this, it'll have more effect than any program I believe that will have more effect in any program you'd ever heard of. It'll be better than health care system because there's a preventative system. The next savings, the humanity and to physical issues will be great. We are doing a good work. I'm really happy to be able to talk about this. Thanks Dave.

Dave: You got it. Now, we're up at the end of the show and tell me you've already answered this question. I'm going to target it to Dan. Dan, if someone came to you today and said like, "I want to know the three most important things you know about that can help me perform better. I want to kick out life, do these three things". What would you recommend?

Dan: What would I recommend, I would recommend just exactly what we've been talking on the show. I would say adaptogens. Primarily, I would even start earlier. I would say use a probiotic to increase your microbiome, the diversity in your microbiome. I mean, your digestive system is the foundation of your health. I would tell people to make sure that they use a very good diverse probiotic. Then I would say to use the adaptogenic elixir that we have here which is a prebiotic and adaptogen is going to help the probiotics work and do their job. It's also going to increase our cellular resistance. We call it functional, cellular integrity and then of course, stay hydrated, try to have a good healthy lifestyle and it keep our brains ... I mean, that's the control center, right? We want to keep our minds and our bodies working together. All these things are going to help. Stay hydrated, use good probiotic, absolutely use adaptogens in your life and then like you mentioned, get out there and do it.

The thing that I have to say about from an American standpoint is, don't be lethargic. Use your body. If you want your body to be there for you, you need to be there for it. You need to put your body through some exercise and just be out. Take walks and enjoy. Go out with your wife,



your girlfriend and just enjoy things together and don't be a couch potato. I have seen this too much. I get a lot of kids coming to Jiu-Jitsu class and their parents are just sort of desperate. They just get them away from the TV and away from the video games. They get in there and they start to come around and do good healthy things. That is a big factor. I've seen that in it of itself. It's wonderful. Those are the three things, Dave. I hope that answers your question.

Dave: Thanks very much. I appreciate it. Thanks for being at Bulletproof Radio.

Dan: Thanks Dave.

Dave: If you enjoy today's show, consider coming to the Bulletproof Conference because you'll get a chance to meet Tom and Dan in person there. They'll be there with Sun Horse and just go to [bulletproofconference.com](http://bulletproofconference.com), check it out and when you're at it, head on over to [bulletproof.com](http://bulletproof.com) we've got some new stuff on the website that you haven't seen before, our brand new website and a new point system that you can use and when you get bulletproof stuff, you can get increasing levels of discounts as well as a bunch of other bonuses like some extra time with me and things like that. Definitely, head on over to [bulletproof.com](http://bulletproof.com) and consider the Bulletproof Conference October 23rd through 25th in Pasadena Convention Center. We're expecting 1,000 biohackers to attend. Dozens of companies with stuff you can play with, touch, and experience. It's going to absolutely kick ass. I'll see you there.

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