



EXPERT INTERVIEW

Mark Effinger

Neurochemist



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Mark Effinger: I'm Mark Effinger. I've been working in biochemistry for years, chemistry from the time I was a little kid. I got into biochemistry and physiology in the mid-80s when I was doing body building and weight lifting. That accelerated in 1993 when I started getting into subsystems and hormone development. Then that progressed to getting into human growth hormone release mechanisms. In late 90s and then early 2000s, I started working intently on elements with a couple of doctors here in the Vancouver/Portland metro area. Then I started working with reference doctors in Silicon Valley regarding how our physiology can be optimized. My whole thing was life extension and how to keep the brain increasing in effectiveness in both creativity and productivity and then energy management and energy balance. As a result of a software company I own, I've had access to incredible minds, including the guys at the Orthomolecular Society and some of the more leading edge researchers in biochemistry. And so, as a result, we've been able to create products with the oversight of some of the most incredible brains in the industry. So that's kind of how we do the stuff we do and why I'm obsessed with this industry. It has an unlimited horizon. There are breakthroughs on a weekly basis. If you take components of those breakthroughs, you can make hybrid products and solutions for people that are so much stronger than an individual nutritional supplement.

Larry: How do you view the problem with sleep?



Mark Effinger: Well, the problem with sleep is actually the reverse of it. The problem is that we're in a society that praises stimulation and kind of downplays sleep and relaxation. Unless you're into the yoga centers and meditation centers and those things, you're playing on the other side of it, which is how many hours a day can you operate at the highest level; how hard can you push yourself before you break down? So sleep is kind of discredited. We often regard sleep as kind of a secondary thing: "Well, I have to sleep," rather than, "I want to sleep," or "I get to sleep," or "Our sleep is going to do this for me." And so, I think it's an attitudinal thing that we need to start adjusting from as a society, but that's kind of where I'm at with sleep. If you don't do the sleep side of it, your performance on the waking side is a fraction of what it will be otherwise. I know people who are basically sleepwalking through life. They're working at 40-60 percent of normal performance, and this isn't like a few, this is the majority. It's because they've experienced, or they don't remember, what it was like in their teens and 20s to operate at 80, 90, 95 percent efficiency. And so, they have this kind of fog they're operating in, a level of thought processing they think is the norm or they think is their optimum. When in reality, they're running at a very low level and a couple of tweaks to their sleep side of it could bring them up another 10-20 percent. But if you're not cognizant of it and you're playing the other side of it, you're thinking, "No, I'm fine. All I need is another Red Bull. All I need is another Monster, another cup of coffee, and I'll get my



performance up." But, in fact, what you're doing is you're basically draining your system of its ability to respond and work correctly. So, how do I view sleep? That's the big problem. The big problem is our attitude first, we praise the opposite side of the spectrum, which is all about hype and performance.

So, why is proper sleep important? That's straight forward, man. A couple of things are going to happen. You're going to have physiological repair. Your body's going to start repairing itself during the sleep cycle. It doesn't do that when you're awake. So you have to get yourself into the sleep state for those things to happen. You get little bits of recurring repair in your body, but you don't get anything near what happens when you get into deep sleep. So that's part one. The other is what's called "memory consolidation." If you want your mind to operate correctly, if you want to be able to recall things, you're going to need to get sufficient sleep at night. You need to go into deep REM sleep, if possible, for your brain to suddenly store things in the areas that it needs to recall later on. It needs to reinforce what are called the neuro-pathways, basically the highways between where data is stored for that specific memory and how to recall it. Once you get that happening, you find your body works a lot better. If you don't the main consequences of poor sleep are your body starts to become unable to rejuvenate things such as adrenal stores, serotonin stores, and dopamine stores. Those are things that make you feel good, and they're the things that give you energy. Right? We need adrenaline for energy;



we need adrenaline to make our heart pump, so you need to have those pieces. But, when you're out of whack, when you don't get enough sleep, one of the first things you may notice is you get snappy. Things like that are your body, you get an adrenaline rush from a stress event, serotonin floods to try counteracting this adrenaline rush, which is basically putting you into a "fight or flight" syndrome. It's not really fight or flight, it's usually more of a mental issue. There was a missed shipment, those kinds of things around the office. So, suddenly you've lost a bunch of this serotonin. Well, you only manufacture so much serotonin in a 24-hour period. So if you use it all up on this adrenaline rush you had during the day, you've got no serotonin available to help you feel good and manage thought processes in other areas of your brain during the day. Or during the rest of the day, you feel kind of fatigued. So, you grab some coffee. That coffee starts a whole bunch of subsystems in your body going, and you're screwed. You're just basically on a blood glucose cycle problem and you're dealing with that.

So, the consequences of poor sleep are your body quits rejuvenating well, you start getting cortisol build up, and, hence, fat and other things. You get adrenal burn out. You don't feel good because you don't have enough serotonin in your system, and you don't get enough dopamine production either. So, along with that, you don't have enough choline in your system cycling to create acetylcholine. So your brain doesn't have the available biochemistry to transmit thoughts efficiently and go into recall



mode efficiently. Basically you're not minding the gap between neurons. So you're not getting the acetylcholine to flow between, and it causes real problems in memory recall. You'll notice that.

Larry: What symptoms should one look for?

Mark Effinger: If you don't get enough sleep at night, you'll notice you can't remember things as well, or things that are normally on the tip of your tongue are suddenly no longer there. Your body will start breaking down over time. You'll get, you'll start getting bone loss, muscle degradation. A lot of the main issues with cardiac disease, with your cardiology, those will start to surface. Plaque starts to build. Testosterone falls off a cliff. Without sleep, you testosterone, bag it man. If you want to have high testosterone, get good sleep, that's your first, number one condition. And, it's the same thing for women. If you want to find yourself making a smoother transition through either high performance, or through menopause (for men it's called andropause) you're going to need really good, healthy, consistent sleep. You know, seven to eight and a half or nine hours of sleep a night, if possible, or during a 24-hour period. That's how I do it. I break it up just a little bit, so I can get away with six hours of sleep. I know I'm going to have the equivalent of eight to nine hours of sleep during the day by doing some progressive napping. I think that addresses what symptoms one should look for. You know, when do you fall off your performance cliff during the day? Do you need coffee in the morning to feel like you're alive? If you do, I highly suggest



you go off of coffee. You can kind of wean your way off of it, take half of what you normally take. Then take half again over the next few days until, and then start mixing in decaf. You can still have the enjoyment of coffee without having the side effects. So, but if you need it, you'll know there's a problem. There's a thing called the adenosine receptors in the brain that are dampened by caffeine. When you allow those receptors to heal and get strong, and you basically clear out your brain from that need for caffeine, you'll find the clarity comes very quickly. It usually only takes four to five days, 10 days max. And again, you can wean yourself off of that. But, you'll notice if you're not getting good sleep, you'll find your body fat increases pretty regularly. You'll find yourself stressed much faster than normal. You'll find that after a stress event in your life, your ability to recover takes a lot longer. Those are critical areas. Then you'll also find that enjoyable things are no longer enjoyable because you don't have serotonin running through your blood stream, in your brain. You don't have dopamine flowing as well. You don't have enough acetylcholine to make good decisions. So, as your decision-making starts to break down, you start to do stupid things. That leads to unhappiness as well, which is just a cycle. So, you're fatter, you're unhappy, you don't feel clear, and you need a stimulant just to feel like you're alive. That whole cycle is, you can't win in that one.

Larry: What aggravates the problem?



Mark Effinger: There are a number of elements that aggravate the issue of sleep. So, if we want to talk about what keeps people from sleeping well, it's not paying attention to your diet, when you start eating, when you stop eating, what you're eating. It's a tendency for us to do the wrong things to get to a sleep state. And by the way, when I say the wrong things, I know. I've got a ton of friends who will drink a bottle of wine, like a liter of wine, by themselves, or 750 milliliters, before bed. That's quite a bit, that's going to be too much. They don't do anything to help get them to sleep naturally. I know people who take Excedrin PM every night, that's their sleep tonic. And, of course, they wake up with a hangover from it. They feel really groggy. It's bad on your body, it's hard on your liver, and it's building up some other issues in your body that are going to make it harder and harder for you to sleep because you're not getting really regulated sleep. So, it's not a bad thing to take things that help induce sleep. But it's really important to cycle those things so you don't get used to them. So your body doesn't say, "Oh, okay, I'm acclimated to this", and suddenly, you're taking more and more and more. It's a typical human condition for us to throw more at something rather than take a look at what it's causing and maybe cycling. A classic example is somebody taking something like an Excedrin PM. Then they'll take two. Then they'll suddenly be at four a night. I tell you, I guarantee, the amount of hangover you're going to have to address in the morning is extreme. So you end up taking more coffee. So now you've got more



caffeine in your system, adenosine receptors are being hyper-damped because 1) they haven't had time to cycle during the night and get clear and 2) you don't have a lot of these hormone-related release elements, such as dopamine and serotonin and acetylcholine, that you desperately need to feel clear. So, you're creating this problem. It's like drinking too much at night. You're aggravating it that way, taking sleep inducers and not cycling them. If you need something such as Excedrin PM, there are a lot better alternatives, a lot healthier alternatives, that actually do recuperative work or assist recuperative work in your body. Taking those is going to be a lot better for you and make you feel better on the way out. In addition, done right, they'll actually, over time, you know, what do they always say, "Combined with a healthy diet," you'll actually end up recovering your serotonin levels so you actually can sleep better. So, the ultimate goal is for your body to work optimally without much input from external sources. But, if you're going to use external sources, use things that are going to help build your body, recover your body. Use things that create more serotonin, more dopamine, more acetylcholine, more of the elements that you need. Then you're not working at a fatigue level all the time. So, that's it.

Another thing is not working out too late. Some people work out too late, although there are some who can get away with it. Their cycle is they work out at nine at night, 10 or 10:30 or whatever, but they don't go to bed. Or they don't go to sleep until 1:30



or 2 in the morning, but they don't get up until 9. So they've got that kind of cyclical thing working. I think Tim Ferriss is one of those guys. That's a classic example of somebody who doesn't go to bed until, you know, 1:30 – 3:00 in the morning but he also starts out a little later in the morning, about 10. So, you can do that, but make sure you're managing and you're cognizant of your sleep cycles. I just keep a notebook of when I'm going to bed at night. That simple action, recording when I'm going to bed and when I wake up, that simple action alone, will help me actually force myself to do better sleep practices. If I'm leaning toward suddenly going to bed at two in the morning, and I know that I operate a lot better at midnight, if I go to bed at midnight, by just journaling it, I'll start looking at this and saying, "Oh man, I've got to get back to that." You know, going to bed at 11:30 or midnight, or 12:30, or 1:00 at the latest, so that the next day, I'm not fighting that same thing that everybody fights. So, if you're doing stimulants too late in the day that can be a real problem. Whether it's coffee or anything that's going to keep you up, and people don't think about simple things that are maybe in their foods, or having a Coke with dinner. You know, with a rum and Coke, the rum's going to make you depressed and the Coke is going to wire you for a bit. Then you're going to be awake and depressed, trying to fall asleep, which is really counterintuitive. So, it's really important to do that and also to do simple things. You want to actually get your body temperature up just before you go to bed. When I say just before, I



mean an hour before you go to bed. Then that allows your body, as it comes down in temperature, to achieve a much better sleep mode. It tells your body to sleep better.

And then, another thing is light. Make sure you are dimming the monitor on your computer if you're a computer user and you happen to be up late on your computer. Reduce the monitor's brightness. You'll notice as you reduce the monitor's brightness, how your body suddenly feels a lot more relaxed, those kinds of things. Turn off extra ambient light so you don't have a lot of light. Then make sure when it's time to go to bed that your environment is set up to do that successfully. A lot of people don't notice little things, but LED lights or other things that are kind of infiltrating your room, those combined can be a real problem. Also, they can make it so you never are really getting a full darkness in your room. So having blinds that also block out light, those kinds of things, ambient light, also is good. Then make sure that if there's any kind of ambient noise that you wear earplugs. In fact, I recommend everybody try earplugs for a week. Just try the fairly inexpensive foam ones that block out a lot of ambient noise. They can work miracles on how deep your sleep goes.

Larry: How would you treat the problem? What dietary recommendations would you make?

Mark Effinger: On the sleep side, when it comes to things you can do I break it down into what relaxes the body, then what relaxes the mind, then what stimulates dream,



what give you deeper sleep. Okay? So, when it comes to the body, you're talking about calcium and potassium, they are huge components. Potassium gluconate is incredible. I would highly recommend anywhere from 300-600 mg of potassium gluconate on a nightly basis. You can't really take too much of it. It's pretty inert, but what it does for your body in terms of relaxing the muscles is incredible. So, if you have (It's so funny, they come up with these syndromes so they can create a pharmacological product to support it.) Restless Leg Syndrome, that's a real syndrome. It's a real condition that people get. Usually it's brought on by too many stimulants and by other pharmaceuticals. Regardless, potassium gluconate is an incredible cure for it, and it's so cheap, it's unbelievably inexpensive. It comes in 99 mg capsules. Get the powdered stuff, I prefer the powder over a tablet. It just breaks down more easily, and it hits your system a little faster and harder when it does, but that's one of my favorites. If you take that and a little bit of melatonin, here's a protocol I find really effective. If you want to get sleep in a half hour to 45 minutes from now, take 500 mg of potassium gluconate. Roughly, they are 99mg each, so just take five of those with four ounces of water or so. Use just enough to drink it down, not enough to make you get up and go pee. Then take a sublingual of melatonin, if melatonin works for you. I recommend sublingual, versus the kind you digest first. Now, the common issue with melatonin is people take it and they wake up four hours later, which is exactly right.



Because what your body is doing is going, "Oh, cool, I'm going to sleep really good for the next four hours." Then human growth hormone is going to be released around, let's just say four in the morning, between 3:30 and 5:00 in the morning. So my human growth hormone is going to be released. It's going to raise my body temperature. It's going to do a little bit of stimulation, and I'm going to wake up. That's the problem people have with melatonin. But, the peak of the human growth hormone release is a very fast climb. It does this slow climb and then it goes up like a hockey stick. If you were looking at a graph of human growth hormones levels in the body, you go through a hockey stick peak, and then it comes down fairly quickly. Then once it gets down to about a 50 percent level, it has a much longer tail. The way to combat that, if you're taking melatonin, is get the melatonin from Trader Joe's, for those of you who have Trader Joe's nearby. It's a tablet, it's sublingual, basically it's a sweet melatonin tablet, 300 mcg of melatonin, which is great because it's not very much. It's not 3 mg. I recommend they try something really simple because it's actually a great product, and it's inexpensive. If you're not a melatonin user, 3 mg is guaranteed to give you a bit of a hangover. It will keep you asleep, but it also will keep you asleep until noon. You'll wake up anyhow, because your body will normally wake up. But you won't be fully cognizant, or you won't be fully awake, until 10 or 11 in the morning, or noon, even after taking coffee. You just won't notice that you're not as awake. You'll notice you're not performing at your best, or



you will feel not quite as happy, because of that kind of overdose. So if you take melatonin, take it in two doses and separate those doses by 20 to 30 minutes. I just use a pill cutter. I cut the Trader Joe's melatonin in half. Then I'll chew half of it, or sometimes even a quarter of it, and let it sit for two to three minutes under my tongue. Then 20 or 30 minutes later, I'll take the other half. Remember, that's exactly long enough to watch an episode of South Park. So, that actually works out really well.

Another element you can take to help induce a longer sleep is 5-HTP. It actually is really good. You want to cycle this one as well. Some people like to cycle it by taking it every day for a week or two, then going off of it for a week. I find those kinds of long breaks create disharmony in my body and I have a number of clients who have the same issues. So, I am of the philosophy you can do it as much as three days on, but then just take the next day or two off, or else do it every other day. That kind of routine actually will be really effective for you. Then, if you're going off of it, if you want to not use melatonin for a night, or not use 5-HTP for a night, you can go off of it. Your body's natural sleep cycles will kick in. So, that's a preferred method. So, 5-HTP is the other thing, that's a really effective addition to melatonin. If you take those two together, it works great. There's a bodybuilder supplement, ZMA. It originally was developed as kind of a bodybuilder supplement. There was some testing on it and, for people who are low in zinc levels, it works really great. But it also seems to be really effective at sleep. Again,



because of the elements of it, it's kind of a perfect storm to a certain extent. So, that's zinc, magnesium, and vitamin B-6. So, you can get it at bodybuilding shops. They put it in capsule or powder form, the powder form works better. It can stimulate your body to want to take a dump, so that's not as good. But, it actually can be very good. It's something you can cycle either with melatonin, 5-HTP, or opposite it and get some good effects.

There's nootropics that we make, a sleep mix called Sleeping Powder. One of the elements in it is called Huprazine A. We have another element called Phenibut, and then Bacopin. So if you take Huprazine A, Bacopin, and Phenibut, you'll get a very, very deep sleep. You'll get extremely good dream activity. You'll go into a long REM sleep, and the recuperative properties are exceptional. If you do it right, the right dosage, you'll wake up very sharp because you're inducing a nighttime nootropic into your system, a nootropic being, brain nutrition. So those work really effectively. These are combinations of things that work well. Alpha-GPC is good in that it's a form of choline for your system that easily passes the blood-brain barrier. So when you have alpha-GPC in your system, somewhere between 350 and 600 mg, your dream states will be much higher because choline is one of the base elements of acetylcholine. Of course, that stimulates thought activity, but if you have too much thought activity then your mind is racing and you can't fall asleep. So, that's where GABA comes in. You can



throw GABA at a racing mind and it will quit racing. Up to 1g or 1.5g of GABA helps that.

Tryptophan is another excellent element you can get. You can get it in powder or capsule form. Again, I like things in powder if I can because I like to mix them into a drink. Then you can feel the thing go to work, and I appreciate having that experiential side of it. So it works really great. There's lysine also. If you're doing Arginine AKG, which I do, Arginine AKG improves the human growth hormone release in the early mornings. So when I'm doing that, I'm mixing that with tryptophan and Alpha-GPC. We make a very complex formula based on your body weight and body size and sleep habits and those things. It has all of these elements in it at certain levels to help you get really, really recuperative sleep. It also supercharges your brain. There's a difference between getting really good sleep, which is healthy and recuperative in its own right, and also priming your brain so the next day, you're at the edge of high performance. Then anything you do during the day you perform better. So, that's really important. One of the things I use to really relax my mind is L-Theanine. That's the stuff that's in green tea that helps relax you. You have to be careful because it's a Gaussian curve of performance, a reverse Gaussian curve, a reverse bell curve, an upside-down bell. If you take too little, you don't feel anything. If you take just enough, it helps you quiet your mind and get really relaxed. Then if you take too much it actually will keep you alert. You'll notice some of the brain stimulant compounds out there



have L-Theanine and caffeine. It's a really good combination together. They actually work as a kind of pseudo-nootropic. They don't do neuro-genesis. They don't create new brain cells, but they do help you feel clearer and help you feel alive without feeling that type of edge that coffee can give you, that too alert, jittery type feeling. So those are some of my favorites. You can throw aniracetam and avena sativa in there as well. One of the things I was going to say is when you're using Arginine AKG, try to induce more human growth hormone release during that period in the morning. Adding lysine to it as well helps that. If you have a tendency towards herpes or if you've got herpes simplex 1, 2, or 3, this will help. The lysine actually will help to abate that. If you do have that, it's probably best to avoid Arginine. But Bacopin, Methylcobalamin, which is vitamin B-12, the best the methyl version of vitamin B-12, those will all help induce quiet but strong dreams. So you won't find yourself running away from monsters. You'll find yourself solving problems and doing those kinds of things.

So, there's a whole array. I'll make sure you get a list of some of my favorites, but there's a whole array of things you can provide. If you take one or two, you may have a little bit of an experience. But if you take the right combination, you'll have an exceptional experience, great sleep, very recuperative. It will prime your brain for activity the next day, repair your body, those kinds of things. That can make a huge difference in your performance. So that's kind of where I sit with those, that protocol. You can start



playing with things like, do you want to dream, do you want to actually start problem solving in your dreams, there's great ways to do that. Vitamin B-12 is a great stimulant during the day. Vitamin B-12 and B-6 together, at night, if you take it at the right time and you take it with the right support nutritionals, actually will help you get into a very, very active dream state. If you know you're going there, you actually can solve a lot of problems in your dreams. So you're not just working on a 10- or 12- or 16-hour work day, you're actually able to utilize some of your sleep cycles to solve problems, or to debug some of your own issues. So that can be really good. And, within that subject, I'm in agreement that you don't want to create an environment where people are addicted to things. What you want to do is create an environment where there's a reduced amount of whatever the supplement or whatever the intake is giving you over time. It gives you either the same results as when you were taking the initial, what they call an attack dose. That is where you're taking a lot of something initially to try building up a blood level. You want to be able to reduce that. So, that's one reason I highly suggest cycling. If you're doing something like a 5-HTP and melatonin, don't do it more than three days in a row. If you do it three days in a row, make sure you take a break of one to two days. There's a mindset that goes with that. If you know you're not going to be taking it on day four and day five, there are a number of things you can do. You can do a workout in the early evening to make sure you're managing your blood flow; you're



managing your body heat, those kinds of things. Don't take stimulants later in the day, past three or four in the afternoon, if possible. Start doing things that will lend themselves well to relaxation. Take some calcium or take some potassium or it can be as simple as a banana. Calcium can be as simple as a glass of milk, or almond milk. Any of those things have good calcium levels that are bio-available. Those things can make a big difference. Then also have the mindset of not actually thinking dependent. Don't say, "Oh my god, if I don't take this, I'm going to be awake all night." That's a sure bet to being awake all night. The other is making sure you practice those rituals. For me it's the breathing ritual. Every time I forget it, I wonder "Why am I not sleeping quite as well tonight?" or "Why is it taking me an hour and a half to get to sleep rather than 15 or 20 or 30 minutes?" It's those kinds of things.

Then also, don't be afraid of something, do your own research. The stuff we recommend, none of it builds up an issue in your body. They all will develop tolerance over time, if you abuse them, if you continue to take more and more and more, or if you take exactly the same thing. So, if you want to avoid building up tolerance, cycle off them frequently. Every other day, every three days, find yourself a rhythm that works really well for you. Then match that rhythm with your activities as well, whether it's working out, your work load at work, those kinds of things. Make sure you do that kind of cycling. Then the other is trying different protocols on alternate



days. So one day you may do melatonin and 5-HTP, the next you might try ZMA and Bacopin, Huprazine. You know with Huprazine you just use mcg, 200 mcg is pretty much a full Huprazine load in your system. It really helps you get into that REM state. It will help you go under fairly quickly and help you stay there. So, change it up. Sometimes people are sensitive to Phenibut. For me, I can do 50mg of Phenibut and it'll put me out. I'll wake up very crisp. If I take it for two weeks in a row, it doesn't affect me. I can do 1g of it and after two weeks and I'll be awake. I can use it. So, it's important to avoid any kind of that adoption issue, cycle things. Do one thing one day, another thing another day, do nothing the next day. If you start doing that, you'll find there's zero dependency. Your body actually will help because you're reinforcing your body's subsystems, hormone release and those factors. It starts to build up your body's own ability to manage sleep cycles, to manage your energy cycles, those kinds of things.

Then the other side of that is, if you have a decent sleep the prior night, don't do a power nap at 6 p.m. because you're not going to get to sleep until one or two in the morning. Unless you need to be up until then, don't do the power nap. Don't push yourself. A lot of people actually will feel as though they need a nap at two in the afternoon and what they'll do is brute force their way through it. Don't. Let the nap come. Do it. It only takes 10-20 minutes to fully recycle your mind, if you do it right, if you get yourself into REM sleep. If you get into that meditative state and pull out of it, you'll feel completely refreshed.



You won't have the sleep hangover people get when they try to nap for an hour or 90 minutes, because that's killer. That's brought you through a full REM cycle, and you basically have shot yourself in the foot for getting a full night's sleep that evening. So it's really important and there are certain things your body is demanding that you're not creating, especially as you age. That's why I recommend things such as potassium gluconate. It's not addictive, and it's very helpful. Your body needs potassium anyhow, and it's kind of inert. It doesn't wreck or cause addiction in any system in your body. So that's really safe. Melatonin, you want to cycle melatonin. Because you don't want your body's own melatonin support systems to quit producing, or to slow down their production. So, you cycle it. ZMA, there's nothing in ZMA that's addictive: zinc, magnesium or vitamin B-6. There's nothing that's a problem there. So you can use that on a consistent basis. You'll note a lot of very good professional strength trainers, bodybuilders, and athletes, will use ZMA on a regular basis. That's because they're eating up zinc, that's converting to testosterone, or it's helping their bodies convert testosterone or produce testosterone. The vitamin B-12, things like that, only use them if you need them. They're not addicting at all, but they are specifically for helping your sleep cycle. They're specifically for inducing colorful, vibrant, almost animated dreams. So it's important to understand what each of the elements do. I'll provide you with a sheet that has a paragraph on each element and how we use them



and a dosage range. You have to find your own dosage. The way we do it is you fill out a sheet and we get an idea of what your habits are. Once we know that, then we make a suggestion and we can work from there. It's really important to manage that but, most of the stuff, the stuff you're dealing with, unless you're dealing with radical hormones or dealing with chemicals, you don't have to worry about it. If you are dealing with stuff, if you start doing Excedrin PM, or you start doing some of the sleepease-type things, then you're running into problems. That's because you're affecting a whole slew of subsystems in the body and those things have a much longer recovery period. You're hitting on multiple points within your physiology. So when you go off them, you get multiple points of interaction that are saying, "Oh, I can't relax now, I can't sleep," and that causes problems. So, those are absolutely addicting. Most of the nutritionals, most of the simple nutritionals, which are amino acid-based, or plant-based, are pretty safe.

I have a problem with Valerian. Valerian root, for me, is a guaranteed slowness the next day for about four hours. It doesn't matter how little I take. Valium is a derivative of Valerian root that's suggested in a lot of the sleep formulas. For me, it's not good. For some people, it's what they think works well for them, and it does. The challenge is, I guarantee if they use something as a replacement for that, such as 5-HTP, they'll find a much better response in the morning when they actually need to be awake. They'll find their sleep cycle is better adjusted. They'll also find



the amount of productive sleep they get, and the clearing of any of the sleep-inducing elements, amino acids, out of their blood stream by morning is done, unless they've got Valerian. I find it lasts a long time.

The other stuff is making sure you're managing your hormone levels at night and you can do that very simply. We make a component called Restoromones that we lean either towards the male hormone levels or female hormone levels. On the male side, if you're producing too much testosterone too quickly at night, in the early part of the evening, then you're going to have a tendency to not sleep well and wake up too early. So, you may finally get to sleep at 2 a.m. and you'll wake up at 4:30 a.m. or 5 a.m. You'll feel kind of like you can't sleep, like you're ready to go, but you'll notice that you're performance is very low. So, it's important to regulate and manage those things, those hormones. You can do them, like for women. We recommend protocols that have a good 5-HTP in them, that have, again, melatonin split into two doses. Huprazine A is really, really great in that, and then the L-Theanine is going to help them relax their head. GABA is going to relax their body and their mind, so they don't have as much of a problem with the hormone peaks they're feeling, which is basically an imbalance between testosterone and estrogen. They're balancing that quite a bit better. So they're not going to have nearly the peaks and valleys they'd have otherwise. And, for men, I highly recommend the ZMA type of element. ZMA is going



to make them sleep better and get a better testosterone production at the time their bodies are going to want to produce testosterone, rather than forcing them into testosterone production. If you do DHEA at nine at night, you're going to have a hard time sleeping. You're going to create great testosterone levels very possibly, but you're not going to sleep and it's going to be a problem. So, you want to make sure you're taking the stuff that's going to regulate hormones at night, and then that improve hormone production during the day. If men are doing androgel, those kinds of things, take them during the day, not at night. I recommend getting off that stuff as soon as possible. Anything that's a direct replacement for a hormone is something I would be wary of, because it tells your body to, over time, to shut down the production of its own hormones. What you want to do in place of that is provide your body with the raw materials to produce the hormones and then find ways to naturally stimulate them. For men, one of the things I highly recommend is taking a shower an hour or two before going to bed. Then what I do is air squats in the shower, working the quads like that. I'll do it to failure, until I almost can't do the last squat. Doing that in the shower, with good circulation in your blood stream because of the warm water, it really helps to relax your whole body, once it brings its temperature down. ZMA and potassium gluconate and the other things I take help to make sure I get really incredible sleep. When you wake up, even if you wake up at 6 a.m., you wake up fully charged.



You feel that hormone, that testosterone rush you get, that you got when you were 16 years old. You get morning wood, which is great, that's a great indicator your body's working. So that's really important. For women, you can do a very similar protocol. And again, large muscle masses in the body are extremely important for helping to both produce and manage your hormone levels. That's because all of the subsystems in your body are responding when you bring those large muscle masses to fatigue.

Larry: What lifestyle recommendations would you make?

Mark Effinger: On lifestyle recommendations, find what your optimum body cycles are. I recommend getting yourself a simple journal, something you'll actually pay attention to, something easy for you to carry around. It can be as simple as your iPhone or smartphone. Then just take notes and notice when you're feeling your performance rise and fall. There are two guys I highly admire, Jim Loehr and Tony Schwartz. They both are high performance physiology guys, professional coaches. Jim Loehr coaches tennis; he's a great athletic coach. What they found was your energy levels throughout the day run in 45- and 90-minute cycles. Most of us, especially those of us in business, have a tendency to push through these cycles. So we use brute force to get through them. You may feel like, "If I just push through this little fatigue I feel, I'm going to do better." In reality, you're actually shifting your whole physiology down a few levels. It's really important to



recognize what your energy cycles are throughout the day and start working in harmony with them. Say you've got five minutes between classes, or when I was in tech school in the Air Force and we got a 10 minute break every hour, I didn't realize how valuable that was. I didn't smoke. So during that 10 minute break, I would compile my notes for the day. Then I would take literally a four to five minute nap. I didn't study anything after school. Everybody else was doing homework. I didn't do any homework after school, or after class, because all of it was done during class. For some reason my performance stayed at a very high level. My retention of information was very high, and those kinds of things. I think I did 97.9 were my scores, my final scores. I did both OSI (Office of Special Investigation) and aircraft technology. So they're fairly diverse areas. Both were very complex and yet, again, I'm a high school drop out. So I'm not exactly the kind of guy you'd look at and say, "Oh yeah, that guys a master." So it was a byproduct of learning these new kinds of study habits, and taking advantage of energy cycles during the day. So, I highly recommend you do that.

I also highly recommend you do simple things such as making sure your diet has very good protein levels. I am a huge advocate of protein shakes, one or two of them during the day. I love what Shawn Phillips is doing with Full Strength. I think Now probably has the top-rated. Even though it's inexpensive, it's a very good protein. A recent evaluation looked at 15 different protein powders you can buy at the store or on the Internet. Now had



the highest level of protein in a non-kind of packaged system, like Full Strength is full package. Shawn imbues that thing with a very deep amino acid base. It's made for men specifically. It's for bringing up testosterone levels and the rest of it while it's also providing a very high level of protein and a balance of fat. So it's kind of an extension of what they were doing with Body for Life. Now protein works great. I recommend one or two of those a day. I recommend making sure you get some food in your system, food and fats in your system, within 20 to 30 minutes of waking up. That sets your whole blood sugar system up so you're able to perform better. If you don't do that, and you eat something sugary, or if you do a glucose spike, or if you take a cup of coffee first thing in the morning, you're screwed. You're going to be fighting your glucose peaks all day long, and you want to avoid that.

The other is, be very cognizant of when your body wants to perform physically, when you work out. I work out all through the day. I take short breaks every day and I do something very simple. For example, I'll do two sets of 40 pushups with my feet elevated. I'll get my feet up at chair level so my head's down and I'll do 40 pushups, different kinds of pushups, right? I'll do two sets of those. Then I'll do pull ups as well. Then I've got flexible weights. So I'll do some curls and I'll roll back on a balance ball and do bench press-type stuff. You could do those, really not even break a sweat, but you still get the benefit of muscle mass doing things. Be sensitive to your body when it's saying, "Hey, I'm ready to go



work out." Try building your breaks in your lifestyle around those periods. You'll find your performance throughout the day will be much higher and that your sleep cycles at night will be more effective because your body's producing all of the hormones you need to sleep effectively during the day. So it's really important to do that.

Then the other is making sure your diet is rife with really good quality food. Whether it's local, try to get local if you can, that actually kills two birds with 1 stone. That is carbon footprint type 101 and, also, if you know who the farmers are, they can advise you on what stuff they have that doesn't have herbicides in it, isn't doing bad seeds and works well. You'll find most local farms, not the industrial farms, have areas that are a little cleaner. They've got a new crop or they've got new dirt there and that can make a huge difference in the quality of your food. I have this habit I've developed of having two big sticks of celery in the morning, and two of them at night. That gives me a fiber component and also it's just great roughage for your body overall. It also gives me some water and some great amino acids and salts. But you'll notice that, depending on where you get that, the taste is dramatically different. It ranges all the way from a very sweet tasting kind of grass tasting, with a little bit of dirt, all the way to extremely salty. It all depends on the earth that it's in because that does a great job of absorbing the nutrients, that's really important.



And then, make sure you don't eat too late in the evening. If you do eat late in the evening, make sure you manage it. Make it easy to process foods and, if possible, small portions. A named Will Moray has what he calls "the five bite rule," which I think is really cool. His "five bite rule" is awesome. It basically says your body's response to food has a decreasing curve over five bites. The way he described to me is the first bite is like a professional million dollar fireworks display, because that's when the dopamine is released and your body feels it. It's like a rush, it's pre-orgasmic. If you really enjoy the first bite, I mean, take you time with that first bite, really chew it up and really get to feel it and appreciate it; you'll find the second bite will be more like a Roman candle. So, that's your uncle with a Roman candle out in the yard. The third bite will be more like a sparkler. Then the fourth bite will be more like a lighter at a concert. The fifth bite will be kind of like the last bite, that's your dessert bite. You'll notice the amount of pleasure you get out of those bites will be receding. So if you do it right, you can respond to that. You'll find your caloric intake of the food, is less, but your pleasure is higher by leveraging yourself into the food and really appreciating each of the bites.

When Shawn Phillips eats, I don't mean to keep bringing up this guy, but he's a great example of somebody who lives his passion, which is nutrition. He has a degree in it from Colorado State University, so he's not a junior in this. He's lived it for all of his life, he and his brother Bill. When I first met him we were down at the Wizard academy in Austin. We were at



this huge buffet line, which is a really good buffet. They actually put together great food down there. He's got a dessert plate out, not a real plate, and he's taking samples, like one-bite samples of each of the offerings on the table. He's taking a small bite of each one, and you see his eyes kind of go skyward as he takes each bite. He's feeling the food and how it feels on his physiology. Does it feel right? Does it have too much of something that's going to cause a problem? Does it have something that he's not going to respond well to later on? During that process, you see him take all those bites. Then he finally decides on the three or four foods he's going to have, the ones with the right amount of fat, the ones with the right amount of protein, and the right amount of carbs. So he was eating a really balanced, very nutritious meal. He didn't have to have a lot of it. He did the three fists type of diet that they taught in Body for Life. It's amazing. The guy is my age, and he physiologically looks like a guy in his 20's who has been professionally bodybuilding or weightlifting. So, the really important stuff is managing your amount of food intake. Don't eat too late, and stay away from stuff that's going to spike your insulin because that's just a problem all over. It never really helps you. Don't be afraid of dessert and things, but make sure you eat them in moderation. When you do eat them, understand what they're going to do to your body. It's better to eat a fatty dessert than it is a high sugar dessert because that's not going to spike your blood sugar as high and it's going to be easier on you.



Then don't drink a lot just prior to bed. You'll feel like you slept, but it's not a good sleep, it's not productive sleep. Because of the alcohol, your body's spending its time detoxing at night instead of giving you a really healthy response. Then manage your water during the day, that's a huge deal. On a regular basis, I'll drink a gallon of water plus a day. That helps keep your body both recharged and detoxed as well. Toxin buildup is a huge problem. You'll find that if you're eating a certain thing on a regular basis, and it's affecting both your waking hours and your sleep hours, you're probably toxic from a certain element that's coming into your blood stream. It's really important to recognize that, work hard to eliminate those things from your body, and then just eat smart. Your body will tell you. I guarantee you the amount of performance difference in eating well versus eating crap is huge. It is the number one element. You start eating well, you start sleeping well, you make good decisions, which means you'll actually start doing other healthy things for your body and your life. You'll find that success follows. It's a guaranteed performance improvement. Eat well, sleep well, take your vitamins, make sure you manage your energy during the day, and you'll be surprised at the success or the changes that happen in your life. Just the optimism alone makes you take advantage of things much better and leverage your life better, your life energy.

Creating rituals for sleep is really good. Back when I was eight years old, I started learning transcendental meditation from a teacher's assistant in school. So I



learned how to sync my heart rate with my breathing to where I could get into a kind of semi-sleep state in about a minute and a half to three minutes. It's just really simple to do your breathing, get your breathing really, really organized and sync it with your heart rate. You'll find yourself getting into a really nice state. Start the sleep process on your back, even if you're normally a stomach sleeper or a side sleeper. Do a good breathing cycle and focus your mind on something other than the thoughts of the day. There's lots of ways to do that, such as counting sheep. As silly as that sounds, it is a great technique. I count my heart beats up and down my breathing cycle. I never get to more than 10 or 12, but counting up and down like that removes my mind's ability to think about the thousand things that want to infiltrate.

The other is keeping a journal. Before I go to bed I make sure I write down anything that's bugging me or anything that needs to be done that I haven't really clarified. I make sure and write it down. I have one of those red illuminating lights to write in my journal. I'll turn that on if, in the middle of the night, I have an idea that I need to get out of my system. Otherwise, it will keep me awake. I make sure to write it down. I use the red light because it doesn't dilate the eyes. It allows me to get that down real quickly and then fall back asleep. I'll usually do that rhythmic breathing with my heart rate process to get back to sleep. There are a lot of different things you can take as well. There are a lot of protocols you can do. That's one of my favorites. That's one I do



religiously because I know that it'll get me in the state. It's the same process that I use. I take one to two binaural audio naps of 10 to 20 minutes during the day. I use a simple binaural audio sample that's really good. It oscillates and varies its frequencies. It starts with a very clean, kind of suggestive, go to sleep thing. Then it also doesn't say anything during the sleep period. Then it brings me out of it 10 or 20 minutes later, whatever I set it for. Those micro naps help bring my body back to a very refreshed state. So I am starting fresh three times a day: first thing in the morning, right after my first nap and right after my second nap, if I take a second nap. Sometimes I don't need it. Then also I'll take a break during the day and go do some exercise. I'll run along the waterfront. I also have gymnastics rings outside on my front deck. So I'll go grab those and do some gymnastics swings and pull-ups and those kinds of things. That also will rejuvenate. It's really important to find those little things that work for you. Create those rituals you can rely on, because everybody's going to have that sleepless night. We're all going to have that stress event during the day that's not going to let us alone. It could be the bad phone call or the bad event or the frustrating thing that might happen. We need to find a way to detox ourselves of that before we get to sleep.