Unlock Your Brain’s Potential: Dr. Michael Turner on Sleep, Exercise & BDNF Transcript

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Restful Bedtime Rituals

So I tell people look, you need to give yourself a restful bedtime ritual. Right? Think about a kid. You can't just take a kid and then say, okay, time to go to sleep, right?

Mary's gonna be in there crying and wanting stuff, right? Like you gotta wind a kid down towards bedtime. You gotta read them a little story, give them some warm milk, rub their back, sing them a couple songs, like all of that, right?

So thing is though, we've not changed. As adults, we actually still need a restful bedtime ritual. We just have to give it to ourselves. So my point being, you can't go from paying bills, watching TV, you know, doing things that are emotionally stimulating and sometimes aggravating, and then in a moment just think your mind's gonna be at peace, you'd be falling asleep, right?

Yeah, so you gotta wind yourself down a little bit. So I tell people, find that restful bedtime ritual. Maybe it's soaking your feet. Maybe it's journaling.

Maybe it's reading your Bible. Maybe it's listening to some classical music. Maybe it's an adult coloring book. This is Doctor Talks, real talk from real doctors on the issues that matter to you most.

All right, so today we're talking about brain health. I'm really excited because I know you have a tremendous amount of experience with pain, with nervous system, just overall functioning of the body.

So what would you say are five big categories that are the most important when it comes to optimizing brain health? Okay. Well, I think the most important of all is exercise.

This is where I begin the discussion with my clients. So, I mean, we all know exercise is helpful for us. We know it strengthens our bones, strengthens our muscles, improves cardiovascular fitness, helps us with weight loss, helps us with mood, et cetera, et cetera.

But I don't think we oftentimes realize how important it is for our brain. And for example, I remember I was doing my research initially and I was really intrigued There were a series of studies done where they had one group just sit and then one group get on an exercise bike for 20 minutes.

And right before that, they would show them some kind of IQ test, like say 20 random names and faces.

Exercise and Brain Health

The group that sat They had a certain recall percentage. The group that exercised recall percentage strikingly higher. And this has been consistent. You can give people all kinds of cognitive tasks.

And if they go exercise right afterwards, they'll come back with better recall, better memory. And so then the question was, why? What's the mechanistic connection?

What's going on, right? And then the answer is something called BDNF. which is brain derived neurotrophic factor. All right. And so a bunch of research exploded about BDNF and basically the idea is exercise boosts BDNF levels and BDNF hits the parts of your brain, especially important for memory learning and basically acts like miracle grow.

That's the best phrase that I can use. It plumps up the neurons and improves connections. It acts like miracle grow for the brain. So if your listeners out there want to know the quickest way to get their brain healthy, it's consistent exercise and then just do an internet search about BDNF.

How do I boost BDNF levels? And that's a whole other subsection, but it's pretty phenomenal. So BDNF spikes because of exercise. And America is so sedentary.

And we're having an epidemic of neurological diseases, whether it's dementia, Alzheimer's, Parkinson's. Have they done anything with looking at those diseases and implementing exercise?

To a degree. So for example, we know with Parkinson's and exercise, there's a tremendous amount of benefit, right? Parkinson's is a dysregulation and sort of a degeneration of some of the motor control systems of the brain.

And so people begin to lose fine motor skills, they develop tremors, their gait is impaired, they're kind of slowed, right? But interestingly, you can actually prescribe exercise of the right type for Parkinson's and people can start to regain some of their motor function.

Or at the very least forced all the laws, but absolutely important. What's also important is the idea of exercise and Alzheimer's. There's a big link there.

And the simplest way that I would describe it is the exercise boosts blood flow to your brain. That's always healthy as you could imagine. And it's also sort of the threshold that must be met in order for your brain to function well, right?

I would use the idea of a dimmer switch. You know, at any given point, there's like a certain amount of blood flow coming to your brain. Your brain can't do anything more than the amount of blood flow that it has.

But when you exercise, you take that dimmer switch and you flip it to full on and you leave it there for a while. And so simply the blood flow to the brain results in oxygen delivery, clearance of waste products, et cetera.

I know Alzheimer's specifically is different proteins in the brain. So amyloid placking, different things like that. Have they seen any sort of reduction with exercise or slowing of production?

Good question. I'm not sure that research might be out there. That'd be interesting. That's intriguing. And then what other things are you seeing? So we talked to exercise, which I love exercise.

I think it's incredibly important. If people aren't moving and they say 30 minutes a day, but is 30 minutes a day, what does that even mean? Does that mean go for a walk?

Does that mean hit workouts? Does that mean a heart rate variability so we get heart rate up? Is there more specific types of exercise that's gonna be more effective?

Yeah, so I'm speaking of cardio. I'm speaking of getting your heart rate up in particular, right? And so the rule of thumb I would use is break a sweat, for 20 minutes a day.

You gotta sustain that sweat for 20 minutes. And I don't care what you do, you could do Zumba, you could walk your dog, you could do burpees, you could do step aerobics, old school, it doesn't matter, but break a sweat, sustain it for 20 minutes.

That's a nice rule of thumb. That's gonna meet American Heart Association guidelines for just cardiovascular health and fitness, but that's also a good proxy for the brain.

Because that's another discussion, but whatever's good for the heart is good for the brain. In the sense that they're both dependent on circulation and they're both dependent on having a healthy blood vessel system.

So when we think of what's important for the heart, we think of not having inflammation in our arteries, cholesterol level correct, blood sugar level correct, avoiding high blood pressure, avoiding secondhand smoking, avoiding excess stress, things like this.

Whatever is good for the heart and the cardiovascular system because the brain is so dependent on blood flow is also good for the brain. Kind of a two for one to get some consistent cardio in.

But my best suggestion, if you're having trouble finding some exercise to do, is just think about what feels fun. That's actually my first suggestion.

When I work with people, I tell them what feels fun, because if it doesn't feel fun, you're doing it out of duty, it's going to be a drag, your motivation is going to wear down.

It's got to feel fun. So think about, you know, get alone with yourself, do some imagination, but what would actually feel fun? And sometimes people are like, you know, it'd be fun if I just walked my dog in this neighborhood park.

Okay, do that. You want a little challenge, buy a 40 pound weighted vest and wear it while you walk in the park. You know what I mean? Bring a kettlebell, do stuff with it.

So there's ways, but it's got to feel fun. And then people are on the right track. Great advice. I think when people force themselves to exercise, they start to dislike exercise as a whole.

When you are cleaning the house fast or when you're playing with your kids or doing things you enjoy, you're going to keep doing them over and over. And it's also about something I learned in CrossFit.

It's something about just doing different things all the time. It can get you excited about doing it. So what other things help the brain? I know you mentioned sleep earlier.

You mentioned nervous system earlier. Oh, yeah. Let's talk about sleep. That's a big one. Really, really big. There's a self-cleaning process that happens to the brain when you sleep.

There's a removal of toxins, a removal of waste products, a removal of beta amyloid, as you mentioned, one of the proteins involved in Alzheimer's. But this only happens during the deepest stages of sleep.

Right. And this actually utilizes something called the glymphatic system. Yeah. With, with a G sounds like lymphatic, but put a G on their glymphatic system.

So if you read about that, this is your brain system to remove metabolic waste products, essentially, um, and, and take them out of circulation, but it only happens during sleep and in particular during the deepest stages of sleep.

Sleep, Glymphatic Cleanup, and Deep Sleep

Therefore. Getting spotty sleep is the same thing as waking up with a brain the next day that's really not fully cleansed. It's not really optimized biochemically.

It's starting to sort of run down and wear down. And for example, there's a profound link between poor sleep and Alzheimer's. That's well, well established.

They've done longitudinal studies where they'll study the quality of people's sleep and they'll predict 20 years later who will have Alzheimer's and they're right because it's so linked.

So consistent lack of deep sleep means these toxic proteins build up night after night after night in your body. You're heading towards Alzheimer's. And so with sleep monitors being as easy and readily available as they are, I'm a big fan of those.

You got one right there? Exactly. Good job. Product plug. So you want to aim for stage four sleep, AKA slow wave sleep. That's your deepest stage. And you want to pay attention to that.

A good goal is an hour. Try to get an hour of slow wave sleep every night. If you're doing that, you're winning the game. Some people are shocked. They'll look at their monitor and they get like 20 minutes of slow way sleep.

I'm like, yeah, that's a problem. Well, what's, you know, what's going on? Well, I get up, use the restroom three times. Well, that's not healthy either.

You know, I want you going to bed. The next thing happens is you wake up. There is no getting up at night. Like that's, that's not optimal. So I can talk about sleep all day and I do with people that's so important, but.

Well, let's, let's add a little bit more than if you want the slow wave sleep and you're not getting it besides waking up to go to the bathroom, which is a different problem.

What do you got to do to get more sleep like that? Yeah. Well, the first thing I think about is the conditions. So your brain, think of a tomb, a tomb is cold, dark and quiet.

Okay, optimal sleep temp is 66 degrees. It needs to be a little cool. It needs to be like, you're gonna have to pull up the blanket to just take a little chill off.

You will sleep better. You will have more rested state. Dark, very important. I sleep with an eye mask every night. I don't care. Even the, like I'm in my hotel room, even the light coming off the little digital clock, right?

No, not good. And the reason is, you know, think about Javen, if your eyes are closed, there's still light that can enter through your eyelid, right? And you think about camping outside, you know, your eyes are closed, you're exhausted, you're in your tent, but you're going to snap awake as soon as the sun comes up, right?

What happened? That sunlight went through your tent, through your closed eyelid, that light still hit your pupil, went back through your optic nerve, straight to your brainstem and revved you up and made you feel alert.

OK, right. So any kind of light, even if you have your eyes closed and you're trying to rest, is going to your brainstem and stimulating areas of alertness.

So the darker, the better. And then, of course, quiet. I encourage people to look for some kind of quiet option. If the dog's gotta move down the hall, like whatever it is, you need quiet.

Because again, although you may be asleep, if there's noise, your brain's processing it and your brain's thinking like friend or foe, right? Your brain's thinking, do I need to pay attention to this?

Do I need to wake this guy up or this girl up? Do we need to get out of bed and deal with it? Like you're giving your brain stimulus to be thinking about?

No bueno, you know? Let it rest. So that brings up a thought. What about white noise machines or any of these other things that people are playing while they're sleeping?

How's that affecting their sleep? Overall, I'm not such a big fan. I would say it's a necessary evil, let's say, you know, some people's nervous system are so acclimated to needing it or they're so distracted by other smaller sounds that they'll just prefer that overarching distraction.

So it's case by case basis, but I'd say it's optimal to just learn to sleep with in silence, certainly from the brand's viewpoint. I've heard that. I actually sleep with a set of frequencies that play that are supposed to help sleep.

And for me, I always slept with a fan on just because I liked cool. And that helped me to sleep better for a long period of time. Eventually didn't have a fan, didn't want to carry it to hotel rooms, knew that it was disrupting me

when I was trying to switch back and forth while I was traveling.

So I found a app and it just had sleep sounds on it and they weren't just jungle sounds or water sounds. It was actually supposedly sounds that helped with sleep.

So what I did is having a sleep monitor on, I would sleep with it on for a week, sleep with it off for a week, and I would actually reach into that REM sleep or that deep sleep where I was trying to get targeted for probably 10% longer with the sounds on.

And I don't know if it's because maybe I was aware of other sounds, but anyway, that was just my experience. yeah yeah that's fascinating absolutely there are certain sounds that have a profound effect on your brain as you can imagine so there's there's a lot of science now about different sorts of apps and such that you can connect one of my favorite concepts is called binaural beats i don't know if you've heard of that right so there are apps called uh with different types of binaural beats where essentially one frequency is going in one year and a slightly different frequency is going in the other year and your brain tries to make sense of it.

And it puts your brain in sort of a certain zone to, to comprehend both frequencies at once. And then you, whatever zone you want, whether it's alertness or sedation, you can entrain essentially through these frequencies.

So there's a lot to that. Yeah. It's basically, basically what this, this was the conceptually doing. It just wasn't the same brand as Binaural Beats, which I've used a lot with clients before clients that have significant sensitivity to environment, Binary Obese can be an easy way to get beginning into their journey of healing.

So we've talked about cool, so cold. I've heard 62 to 68, is that something that you target? The number I've always seen in my research is 66, but I'm open to new information.

But in terms of like, if we had to pick one number where people sleep the best, 66 is what I've always seen. Beautiful. I'm going to mark that down to remind a few people I know.

Yeah. My family when they're at my house. I'm religious on that thermostat every night, man. Things got to drop to 66. There's nothing worse than feel a little hot and stuffy.

You're kicking off blankets and turning around, right? That's what you don't want to avoid. You're not getting your slow weight sleep targets if you're doing that.

Absolutely. And there's a piece of tech that I actually put on my bed. It was a chili pad. Have you ever heard of those? I've heard of it. So it's a pump that pumps water through a pad.

And it was really interesting to me because as they've developed their technology further, you can put it on the bed. You can have the bed 90 degrees when you get in it.

I don't like that, but I know some people do, some clients I've talked to. So it starts at 90. And what you do is you have it timed out. So it says you need to be in bed at 10. It's at 90 degrees.

So you get in and you're not cold. And then it cools for the next 30 minutes or so, whatever you set. And it can cool all the way down to 66. And then instead of having some sort of alarm that goes off in the morning where it's beep, beep, beep, and you get this like jolt to wake, it heats until it gets to whatever temperature you set it to heat.

So 90 or 100, I think it goes to 105. And it will wake you because you're kind of uncomfortable because you're hot. So you wake up to warmth, but it's a gentle, slow wake.

I like the concept. There's a lot of good to that physiologically. I can see the benefit. That's fascinating. I loved sleeping on that thing because it kept it cool.

And I honestly, I was saving money at my house because the house could stay at 75, but the blankets were 66.

Yeah, right. But okay. So we've talked exercise, which is a must sleep, which I think everybody agrees that we know sleep is important, but sleep hygiene, which is what we were talking about, is just not practiced.

Right. I know I have a whole workup in my office. I'm like, here, here's sleep hygiene. Um, I'm curious for people that you're working with, have you ever recommended elevating the head of the bed slightly for better lymphatic detox?

Interesting concept. I've not, I've not recommended it. I'm open to that. That might make some sense. So I ran in, I'm always just collecting. So I'm listening to you and I'm going, okay, like how can I better make my little handout that I give for sleep?

And I was talking with some people and people that don't detoxify well. So people with MTHFR genes, COMT, or even HLADR. So they're a little bit more toxic or more sensitive to toxins like mold.

I run into a lot of these people I'm working with. And one person said, well, if you raise the bed, it's just gravity. So you're helping the brain with gravity to use the lymphatic to be able to drain toward the heart, toward the lymph drainage.

And I've done this with people and I've actually seen a increase in deep sleep and a increased recovery on their wearables because their body is just a little bit more effective at night.

Sleep Hygiene: Light, Temperature, and Sound

Now, I don't do this all the time. I don't do this with my own body now that I'm well, but when people are coming in at a deficit, I'm looking for all help and gravity is an easy one.

Sure. I guess that's a simple win. That's a good one. Now, are there supplements that you've found to be effective to help sleep? Yeah, absolutely. To touch on that, if I can just go back one second to on the sleep hygiene, because this is a great point.

I want to make two last comments about sleep hygiene that I think are important. These are kind of my heavy hitters when I talk to patients. We can talk about supplements, but one of them gets back to that question of light.

It needs to be dark, right? This also involves you leading up to going to sleep. Okay. So, right. So let's just say you're in your bathroom, all the vanity lights are on, right.

You're like taking down your makeup, washing face, doing this. You're staring into all these lights with mirrors. Okay. And then you flip that light off and you think you're going to lay down in bed and fall asleep in five minutes.

Impossible. It's not happening. And again, every time there's bright light shining in your eye, straight through the optic nerve, straight to your brainstem causes alertness.

Right. So you're street, you're, you're doing exact opposite of what you're wanting to have accomplished in a few minutes. Right. So it's the big problem.

So I tell people, you got to start like winding down under low light conditions, like dimmer switches. Absolutely. In the master bathroom. Right. You want to read a book, get a little book light that clips on your book.

That kind of thing. Yep. Big difference. So people, and you, you'll know, because if you have trouble falling asleep, you're tossing and turning for half an hour, 45 minutes before you get to sleep, right?

That's a sign of something's off in your cadence. You should normal sleep latency is what we call it. Good one would be like 10 minutes. Five, 10 minutes, something like that.

Yeah, so consider killing some of the light exposure just prior. But my other concept is sometimes people have

trouble falling asleep and it's because of their stress, it's because their mind's going, they can't get their mind to shut off, right?

They're thinking about the bills they gotta pay, they're thinking about taking the kid to soccer practice, what they're gonna cook for dinner tomorrow, the boss, tough conversation they had, et cetera.

So I tell people, look, you need to give yourself a restful bedtime ritual. Right? Think about a kid. You can't just take a kid and then say, okay, time to go to sleep.

Right? Mary's going to be in there crying and wanting stuff. Right? Like you got to wind a kid down towards bedtime. You got to read them a little story, give them some warm milk, rub their back, sing them a couple songs, like all of that.

Right? So thing is though, we've not changed as adults. We actually still need a restful bedtime ritual. We just have to give it to ourselves. So my point being, you can't go from paying bills, watching TV, you know, doing things that are emotionally stimulating and sometimes aggravating.

And then in a moment, just think your mind is going to be a PCB fall asleep, right? Yeah. So you got to wind yourself down a little bit. So I tell people, find that restful bedtime ritual.

Maybe it's soaking your feet. Maybe it's journaling. Maybe it's reading your Bible. Maybe it's listening to some classical music. You know, maybe it's an adult coloring book.

I don't know, but do something where officially your function in the day of I'm getting work done and I'm getting things done and I'm feeling productive, like that's gotta shut off sometime before you sleep.

And then there's gotta be this intermediary zone, which you're actually preparing for sleep and getting ready to create quality sleep. And if you ignore that zone and you just run the one right up to the other, you're gonna have trouble with getting a good night's sleep.

I had this experience very recently where I was watching the Chiefs game and they're playing the Chargers and it's all the way to the end and they doink a field goal off the upright.

And it's pretty intense all the way up to that. And I'm a big fan of the Chiefs because I'm from Kansas City. So you better believe I didn't go to sleep like three hours after that, even though I should have been going to bed immediately because I'm just like, I'm so awake right now.

Exactly. I had no better than this. So I paid for it the next day. My sleep monitor just like, dude, what'd you do last night where I was so stressed out and I was just like, exactly.

I'm laughing at myself because I knew it was coming. But I had a question. So you said light, you said dim light. Yes. My bathroom, what I did is I built a red light panel into my shower.

So that's for the shower, that's for doing red light, that's a different topic. But instead of ever using light at night, because the panel kind of shines in the shower, which goes into both my bathroom and my bedroom, I only ever use red light at night ever.

So there's no other blue light or white light at all. Do you have any sort of opinion on color of light, type of light? Is one better or worse than the other?

Is it just brightness? Good question. There's a major difference. Your red predominant spectrum lights versus your blue wavelength spectrum. And they each have their function, actually, which is quite a fascinating concept for all of you out there.

If you want to read about this, the medical topic is called photobiomodulation, which is the big $25 word to talk

about how different wavelengths and frequencies of light affect you physiologically.

But it's pretty striking. Let's just take an obvious example. You can be outside and light that is streaming down from the sun can literally affect how your skin looks, right?

It can change the color of your skin. It can cause, in a bad case, cancerous growths to break out over time. Right. So light clearly can affect your physiology quite a lot.

We also know that in terms of mood. This is a fact. When you get outside and you get sunlight, your mood will elevate. Yes. And this has to do with actually the blue wavelength spectrum.

So the blue wavelength spectrum predominates in the morning. Morning sunlight has more of that versus like an evening sunlight where there's more red wavelength.

The blue has its pros and cons. The pros though of the blue definitely are alertness, energy. So the idea is your body's meant to get out, get some sunlight every morning.

The blue wavelength of light goes into your brain, stimulates the alerting centers of your brain, stimulates mood. neurotransmitters like dopamine, by the way, and also fires up your adrenal axis.

And I know you drill with adrenal concerns quite a lot. It comes into play with chronic illness, right? So the first thing I tell people, if you have adrenal fatigue, then they ask me, you know, how can I ramp up my adrenals or how can I improve that naturally?

And I tell them morning sunlight, will do that. It is a natural signal to ramp up your body's own internal production of cortisol and DHEA. Okay. But sometimes we can't get outside or it's too dark or whatever.

And that's where a blue light box can come in handy. So you can literally go on Amazon and find a blue light box. It's going to look like a little space heater.

It's going to shine very bright blue spectrum wavelength light. And it's like sunlight in a box, essentially, if you can't get that any other way. And so I tell some people, get up in the morning, do your routine, but just have that blue light box shining towards your face.

It's gonna be streaming in. It's gonna hit your eyes, go through the optic nerve, hit your brainstem, ramp up mood, ramp up alertness, ramp up your adrenals.

And that works well. And so some people, I've told a guy, for example, is like, I get up, I feel tired every morning, and I'm trying to take naps in the afternoon or drink a Red Bull.

I'm like, get a blue light box. This guy called me back. He goes, I'm doing great. I love it. He goes, I flip that thing on the afternoon for 15, 20 minutes at my cubicle.

I don't get tired anymore. It works great. So that's blue light. The downside of blue light is obvious. There's two things, but one of them is it makes you hungry.

Okay. So this is where. The idea of staring at your computer screen all day, people have gotten into having blue light blocking glasses because unless you're feeling sedated and you need that alertness, too much abnormal spectrum of blue light consistently actually stimulates some hunger.

And so people overeat instead of their screen, that kind of thing. So that's where blue light blocking glasses come in a little bit. But the other thing is blue light, of course, being alerting is a very negative concept towards bedtime.

Supplements, Melatonin, and Alcohol

which circles us back to your point. So you wanna be killing the blue light in particular leading up to bed. It's not just all light, it's that wavelength.

So infrared light all day if you need it as you're heading towards sleep. And a lot of blue light's also coming out of our new LED type lights in our home, right?

All the lights that we have all over our house. So you were talking about the vanity, you're talking about everything else. We've gotten rid of the fluorescence that were a little less blue.

And so everything you're probably flipping on your house, your TV, your cell phone, all blue light. You can switch your cell phone to a little bit more red frequency light, right?

So you can do that, which would, if you're a scroller at night, not that I ever recommend looking at your phone before bed, it's a bad habit, but if that's something you're doing, at least take the blue light out of it.

Indeed. Yes. But yeah, so I use all that red light and that's been a huge change for me because I can go pretty quickly to sleep after having the red light on.

Because I'll be reading a book, watching TV, whatever, then flick that off, do my nighttime routine in red light, go to bed, and that latency is pretty quick.

Those are on sleep. the supplements that you've seen work for sleep. My favorite to start off with is GABA, G-A-B-A. So GABA is a neurotransmitter in your brain that is sedating, promotes restful sleep.

It also has the benefit of promoting growth hormone release by the way. Gaba is the neurotransmitter involved in growth hormone production and releasing your brain.

Gaba also promotes new memory formation and memory consolidation, which happens when you sleep. So things your brain's been processing during the day are really consolidated and deepened during sleep.

And GABA is a key neurotransmitter in that process. Now, besides being a neurotransmitter, GABA also is available as a supplement, interestingly enough, over the counter.

You can go on Amazon or other places and find a high quality brand. So I'm a big fan of GABA every night before bed. I also like magnesium. Magnesium is sedating.

Magnesium is the most common mineral deficiency. Besides helping with sleep, magnesium helps with cellular energy creation. It's got to roll down in the biochemistry of your mitochondria to help with energy output.

It's got a role to lower blood pressure. It even has a role for men to help lower what we call sex hormone binding globulin, which basically means you're going to have more free testosterone available.

So magnesium is a big win. I'd definitely start people with that. My, my other one real quick would be melatonin. And I almost forgot that that's really important.

I actually don't think of it as a supplement because it's a hormone, but melatonin is a big deal. I take 10 milligrams sustained release. Been doing it every night for months.

What's fascinating about melatonin is it doesn't just help you with sleep. So most people have it pigeonholed in the sleep category. It's way broader than that.

It stimulates your immune system. It stimulates T-cell activity in your body, for example. It has strong anti-cancer properties. If you just type in melatonin and cancer, you'll be shocked at what you see.

Very strong anti-cancer properties. In fact, some integrative cancer doctors will immediately start their patients on

30, 40, even 60 milligrams of melatonin.

What's also interesting is there's no perceived upper limit of dosing that we found. There's no dangerous limit of dosing. Like with experimental animals, you give them certain pharmaceuticals or certain things.

And of course, at some point you can kill the animal. We call that the lethal dose. There is no lethal dose ever established for melatonin. You can keep ramping it up in any experimental animal.

You can't kill the animal. Okay. So there's quite a safety range for that. That's why I'm a big fan of melatonin. The only downside to it, and some prominent people like Huberman and some others, they've knocked it a little bit and they're like, well, it's going to down-regulate your body's own natural production.

which is true. That happens to a degree. This is why I would be hesitant in a child or youth or something. You want to allow their own natural hormone circuitry to ramp up fully.

But as you're an adult, considering that melatonin declines with age and it's a marker of aging, okay and this is also considering the fact and the reason why children sleep more soundly than adults is because their melatonin surge is greater okay considering all that i would rather have a supplemental dose of 10 milligrams let's say consistently and become dependent on it but at least my body's getting the benefit of it Then slowly watch my body just wither down and it's natural to where it's putting out a milligram, 0.5, 0.25, et cetera.

And my sleep gets worse and worse and my Alzheimer's risk goes up and my inflammation goes up. And by the way, my blood sugar goes up and my weight gain.

Cause when you get poor sleep is associated with all of that. Cause sleep relates to insulin levels and ghrelin and hunger. That's also fascinating. That's a whole nother discussion, but you can take someone who has previously had good sleep and good weight management and they get a shift work job or something like that.

They will gain weight and their blood sugar will go up. Even if they eat nothing different and if they do all the same exercise and that's all hormonal.

Sleep also hormonally relates to testosterone. I tell guys this, if you're averaging about five to six hours a night of sleep versus seven to eight, your T is about 30% lower.

That's been established. And that's because your body's working at night on producing testosterone. Your testosterone peaks that next morning around 8 a.m.

This is typically the idea of you waking up feeling vigorous, kind of energetic, ready for your day, along with your adrenals. If you're getting crummy sleep, you're not getting that wind up every night.

So guys, do yourself a favor. in terms of testosterone, get to sleep. And by the way, avoid alcohol. This is for men and ladies, but alcohol destroys sleep.

I don't know if you drink it all, but people who have fitness trackers, as you know, you just mentioned you do, and occasionally have alcohol, they will see the difference that it makes.

Yeah. Yeah. So it's interesting alcohol sedating, but it doesn't put your brain in like deep restful recovery zone of sleep. It kind of just knocks you out, but it, the brain chemistry is not favorable.

Um, and so I, that's a big, simple one is kill all alcohol before bedtime or it will mess with your sleep. Fully agree on that. I've actually purposely tested that.

Have a long pattern of, this is how I sleep while doing all the appropriate things. Give yourself one alcoholic beverage, just one, you know, that, you know, one old fashioned or that one beer or whatever.

And we're not talking about allergies to gluten or anything else, just talking about purely the alcohol. and you will see a noticeable difference in sleep quality, noticeable difference in your recovery for the next day.

I've also taken it another step forward because I was just curious, like all these hangover supplements, all these theories on what you could do to try and help it.

So I saw a noticeable dip. Yeah, then I took and not that I did a lot because I didn't want to really check too far because I was like, I like my sleep.

But I did actually take the detox almost like Tudka and milk thistle and binders. And I actually did see an improvement. Not back to well, not back to where I want to be.

Yeah, but it did show some improvement. Like, all right, so there is something to this, like if you're gonna drink, do some detox, some support, take some magnesium, some electrolytes alongside of it.

But yeah, alcohol crushes testosterone and sleep. Well, this has been amazing. I'm so glad we got really deep into sleep and how it affects brain health.

And I'm just really appreciative of your conversation today. Thank you. I enjoyed it very much. Absolutely. I was a school teacher before I went into medical care.

So I love to talk and learn and try to explain things in the most favorable way for people. So that makes sense. Thank you for having me. I enjoyed it very much.

Thank you for tuning in to Doctor Talks. We hope today's episode has enlightened and inspired you on your path to optimal health. Each day is a new opportunity to make choices that empower your wellbeing.

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