

Upgrade Spotlight: Improve Your Sleep With a Cooler Body Temp – ChiliSleep – #923

Dave Asprey:

You're listening to The Human Upgrade with Dave Asprey. This is a special upgrade spotlight edition, and this is where I dig in on a short episode on the specific kind of technology that you can use for biohacking. And in this one, we're going to talk about using cooling technology for sleep specifically. Our guest today is ChiliSleep founder, Tara Youngblood, and she started the company so people could get the coolest sleep ever. Tara, welcome to this quick episode.

Tara Youngblood:

Yeah, thanks for having me.

Dave:

You studied Chinese medicine, Ayurvedic practices, neuroscience, psychology, degree in physics and science, and you make things that chill sleep. Why?

Tara:

Because sleep is amazing. There's nothing better than that feeling when you wake up and feel refreshed. And sleep, I think, is the ultimate retirement package. If you want to live a long time, which I know is part of your directive, sleep is a key element to that. If your brain can't rest, if it can't heal, if you can't optimize for the best sleep, you're not going to deliver amazing sleep throughout your lifetime. It's going to fall off and get worse, or disease states or whatever is going to mess it up. So sleep is something you need to invest in to feel great forever.

Dave:

In my anti-aging book, Super Human, there were four killers. And step one of living a long time is, well, don't die, and they were cardiovascular disease, Alzheimer's disease, cancer, and diabetes. It turns out that getting quality sleep and getting enough, but not necessarily even eight hours, reduces your risk of all those. So if you want to not die, you have to learn how to be a professional sleeper. And one of the problems, people wake up a lot. Tell me what ChiliSleep does for sleep that's different.

Tara:

Yeah, so we really... Back to the biohacking part, I do feel like we've unlocked something that's really special. Everyone knows about light, and I am wearing blue light blocking glasses since I'm up late and trying to do this a little bit later on the east coast, but temperature has a unique role as well. So our brain cools and heats and changes temperature. Our core body temperature changes with our circadian rhythm. Turns out we're entrained to this planet that we live on that goes around, and we want to be cooler at night. And our beds today with foam mattresses, that may feel good pressure wise, are not really good for a cool, relaxing sleep. They may be good for relaxing from a comfort, but not from a temperature. And we put blankets on. We haven't climate control that puts one climate temperature through the whole day, all seasons. There's no change in that temperature, and we didn't really evolve to sleep or really live that way.

Our body wants those triggers of temperature. And when we unlock that, we can unlock different sleep states. And I do believe that's the future of... I don't care how long you sleep, I want you to have great sleep and deliver that, and that's what we've been able to accomplish with ChiliSleep.

Dave:

We evolved to sleep in caves or out somewhere, but without a lot of heat, maybe some animal skins, not that much insulation from the ground. So just like we never get cold with cold water or cold showers, even though we did when we were living in the natural environment, this kind of replicates the temperature setting, which seems really, really important. What does cool temperature do to melatonin levels in the body?

Tara:

Yeah, so actually, there's something called a sleep switch, which the reason I spent so much time researching sleep is I was a chronically horrible sleeper, and I felt like there had to be a way to solve this. And when I heard about a sleep switch, I was kind of almost angry, like, really? It's that easy, and I've missed it this whole time? And so, it is. It was discovered in 2003 by Clifford Saper out of Harvard, but it is a change of temperature. And that's why the whole spectrum of us, whether it's slightly warming your feet, or you talk to Terry Wahls for MS, and she may do a 20 minute ice bath.

And most of us fall somewhere in between, but if we can change the temperature and trigger us to go to sleep, females will more likely be triggered by a nesting or slightly warming, unless we're going through menopause, and then it turns that upside down. Men often are triggered by a cooler change in temperature, but again, those are stereotypes. But in general, a change of temperature is going to trigger the release of melatonin and that helps us fall asleep faster.

Dave:

How would you compare chilling your mattress versus just turning your air conditioner up?

How would you compare chilling your mattress versus just turning your air conditioner up?

Tara:

Yeah, so we were just in Texas for South by Southwest, and those Southern states, you can't really cool your temperature of your house down to 60 degrees in the summertime when it's 110 degrees. So there is that. Fans are not generally good for you to have a fan blowing on you. And so when you can sleep naturally and just have your bed cool, the energy efficiency is really spectacular. We're actually in a benchmark study in the UK right now looking at air conditioning replacement, although in the UK, only 1% of homes have air conditioning. So it's really looking at, for those heat waves, and in the future, more heat waves with global warming, how do we accomplish sleeping well at night, still being energy efficient? That's where we feel like, just cool your bed. Don't cool your whole house.

Dave:

I never thought of using ChiliSleep as a money saver for electrical bills, but it's way cheaper to do that than run an air conditioner to chill air, because air is an insulator. It doesn't conduct temperature very well. And if you have lots of circulating air, it's bad for your sinuses. You don't want to have too much air, but you don't want completely dead air either in your room. So, that's interesting. I'd never even thought of it. But yes, if you're in a really hot part of the world like Texas, if you're not hot because your mattress is cold, you can wake up and cool your house, which is a really a really big cost savings.

Tara:

Yeah.

Dave:

What do professional athletes do with cool sleep versus what someone with, say menopause would do? What are the different use cases?

Tara:

Yeah. So actually, we spent a lot of time where we actually have relationships with 63 different professional teams. I coach the Cincinnati Reds, Cole Custer, a NASCAR driver just started using our product. And even within two weeks of coaching, he was seeing much better sleep, much better recovery, less stress metrics across the board. So a lot of times, it's in cognitive performance when you're an athlete. You think about the physical side, and there's obviously the physically being better. But when you think of a reaction time, it's kind of a pairing of both. Your brain has to react faster. We see it with our baseball players. So that millisecond reaction time can be up to 23% faster, which again, sounds small, but when you're catching a baseball or trying to hit a baseball coming at you at a very fast rate, every second counts, or millisecond in that case. And so that's where we really make a big difference in those performance metrics. And it's highly measurable. It's pretty phenomenal what good sleep can do for someone performing, again, Olympic athletes all the way to NASCAR drivers, everyone can see a difference.

Dave:

Reaction time is one of those things that goes... It goes up as you age. You get slower as you age, even just the amount of time it takes your brain to feel the environment. I do chill myself when I sleep, and I've been... I think I was the first person to ever talk about ChiliSleep on the podcast years ago and it was first launched. And my brain reaction time measurably, using in the 40 years of Zentech, is about equal to an 18 year olds. It's way off the charts. And I am not 18, in case people were wondering. So there's a really big difference. I don't know how much of that comes from ChiliSleep versus high quality sleep, versus all the other brain hacking, but I would say it's working for me quantitatively, and you feel different.

But one thing I don't know is, the ChiliSleep system goes all the way down to 55 degrees Fahrenheit, which is 13 centigrade, all the way up to 115, which is you have a fever, which is 46 centigrade. How do you really know what the right temperature for you to sleep at is?

Tara:

Yeah. And the app does coach you through that. It's really about sleep states and what you're trying to do. So we also work with a lot of different military, every kind of military out there. We did a Navy Seals. We did some with drone pilots. But what they're really looking for is, those young military folks don't really like going to bed and sleeping eight out hours. So it turns out if they only sleep four to six hours, how do they still get amazing sleep to still get that cognitive best? By being able to manipulate the temperature for sleep states, and that really equals cooler for deep sleep and warmer for REM sleep. When you can manipulate that, no matter how little sleep you get... We talk about something called sleep density. So Kelly Starrett, who's on our medical board, sort of really derived this term called sleep density. And again, if you don't have eight hours or you're just not someone that sleeps for eight hours, whatever time you have to give to sleep, you want the best density of those high quality sleep states. And that's what we can deliver with temperature.

Dave:

Kelly's apparently good at naming things. When he was on the show a while ago, years ago, he coined the term disaster pants, which is what happens when you have too much cheap MCT oil. So thanks, Kelly.

Tara:

[Crosstalk 00:09:32] That one's a very horrible visual.

Dave:

But you know what I'm talking about, right?

Tara:

Yeah, yeah. There's no mistaking that one.

Dave:

And he works with a ton of professional athletes, a lot of Crossfitters and really helps them with mobility. And it's interesting, even though that's his expertise, he says, "You know what? I'm going to look at sleep because that's a big part of it." And I a hundred percent agree, sleep efficiency or sleep density, that's what happens. And I've posted my results sometimes, when I'm chilling myself for sleep, where I might only get four and a half or five hours of sleep. I'm getting up for an early flight or whatever, but magically my deep sleep and my rem sleep are still phenomenally high. Sometimes 80% of the time I'm sleeping is those states when that's all I have. And that's very highly dense sleep. And temperatures are major signals. Darkness and temperature go together. And you guys have a new thing called the Dock Pro sleep system, which I wanted to talk about because it just came out, as of March 10th, 2022. So it's really, really new.

Tara:

Very brand new.

Dave:

What is up with a Dock Pro? Why is it different than something that's been out before?

Tara:

Yeah. So this is benchmark across the board, and it really goes back to the sleep research that I've done of... And it's almost putting ourselves... If we want to get cold, when we sleep back to that deep sleep, in order to extend that deep sleep time, especially for our athletes, it's about slower brainwaves. So when we think about sleep, what does that look like? It's slower brainwaves for longer periods of time. And the cooler you are during deep sleep, the more you can do. So what's different about the Dock Pro is we have about 60% more cooling than anything else out there. So that headroom... And when you work with NFL lineman, that makes a really big difference. That means no matter how big you are, because we have some 360 pounders that can put off a lot of heat at night, I need to freeze them down really cold during that deep sleep to still get them to sleep. So it's about that thermal capacity, the ability to heat exchange, no matter how much heat is putting off, and be able to be highly sensitive there.

And that's where we've really dialed into that temperature sensitivity, being able to get that heat off and have headroom to be able to drop you even cooler in deep sleep.

Dave:

Now, one of the problems that I've faced in the past is noise. You want a completely quiet sleep environment, but then you have maybe your air conditioner cranked up and things like that. But having a cooling fan that's cooling part of your mattress is an issue, but the new Dock Pro is 30% quieter than before. When I first got an early prototype of it, I thought it wasn't on, but it was on, and it's ridiculously quiet, and it's more powerful than before, which is really, really cool. But what about EMFs in the mattress? What are you doing about that?

Tara:

Yeah, so that is something we've really stood firm on. I know we're fellow believers in keeping EMFs out of the bedroom, because you're sleeping. You're very vulnerable in that state as you're looking to heal, specifically during deep sleep. So there's no EMFs in the bed at all, and we've done that on purpose, to keep it away. Even a lot of the trackers, they may be low, but it's still like sleeping with a vacuum cleaner when you have that sort of tracking happening in bed, and no one wants to have the EMF level of that while you're sleeping.

Dave:

So, and it even includes an airplane mode setting, so it's got no wireless connectivity. I really value that when I go to sleep. I think it's important, and that's a new innovation for you guys as well. Something else that I'd love for you to explain is, my old Chili system, before you came out with the Dock Pro had tubes in it for cooling. What are you doing that's different now?

Tara:

Yeah. So this is actually really where we went and spent the extra time, and honestly money, in getting this right. So it's a urethane layer. So we're not using PVCs. We're not using tubing. There's no off-gassing from materials. It's a really inert environment, because again, you don't want to have extra chemicals, even fire retardant. Our previous Chili system, you had to wash it and you could get it out, but in order to meet fire requirements, we had to put that in there. We've gotten around that with this new pad. So there isn't even fire reduction in chemicals that are required in California or those kind of things. All of those have been reduced. And then using urethane as those two layers, we have a patent flow pattern that goes through there. So no matter where your pressure is, or again, if you're that NFL lineman and laying on your side at 350 pounds is a lot of pressure in the spot, but it's actually a really cool flow pattern that makes sure there's always water flowing in and around you.

Dave:

And you can put this on top of a latex topper or anything else. Because it's a membrane, you still feel whatever your mattress surface is, right?

Tara:

Yeah. And actually, this fits in, I really think, better than anything. We can do half the bed, which is great too, if you have an adjustable bed, or you only want half the bed. Maybe your sleep partner or your dog, if whoever's on the other side of the bed, doesn't want it, although usually my dog loves it, but it is about keeping one to the bed. You can have a me or a we. So there's ultimate flexibility on any mattress. We ship all over the world, so whatever kind of mattress you want to put it on.

Dave:

What's the biggest difference between two partners sleeping together you've ever seen?

Tara:

Todd and I probably, when we started this and when we came up with it, were probably as extreme as possible. I was always cold, but then he would put off so much heat, and all our boys, even, we have four boys. I mean, literally when he is asleep, you can feel heat coming off like it's a space heater. It's crazy. And the boys could never fake sleeping because you're like, "Ooh, I can tell if you're sleeping because you start to generate heat." So I used to put a pillow [inaudible 00:15:19] between us in order to have my temperature, not get messed up by how hot he would make the whole bed.

Dave:

Wow. So then he chills his side of the bed a lot. And then do you warm your side of the bed because you're a cold sleeper?

Tara:

This is the conversation... I think you asked about, how do you set it? We do have a schedule, but I need to warm up to fall asleep. But then I do chill it down. As soon as I've fallen asleep to much colder. So my cold actually matches his almost really pretty close, but I warm up to fall asleep. So I have it set, so about a half hour. I usually read before I go to bed. So it warms up, I climb into bed, I read, and then by the time it's about 10 minutes after I fall asleep, it drops down. And then I also use it for warming up, because we talked about that sleep switch, turning off sleep by heating up is the best way to get a little bit of a cortisol buzz in the morning. So what releases melatonin at night will release cortisol in the morning if you warm up from sleeping, and it helps trigger that whole start. Helps if you get sunlight as well, but again, that pairing between temperature and light is pretty magical.

Dave:

Really, heat is just infrared light anyway. And people oftentimes say, "Oh, cortisol's bad." No. Cortisol's are circadian hormone that keeps you alive. So you're supposed to have a rise in cortisol in the morning. What else can raise your cortisol in the morning? A cup of coffee. And it's totally normal and healthy to raise cortisol. It's when it stays up all day long, you have a problem. What makes that not happen? Getting a good night's sleep means you can manage your cortisol better. So that gentle raise in the morning, it's pretty neat. They make a few alarm clocks out there that turn a light on, usually junk light, in order to wake you up. But if instead you just use heat to wake you up in the morning, it's really surprising how different you can feel from that. Now, the timing is something you set in the app. You have the app program, the new Chili system, and then you can put it in airplane mode and it just runs the program you put into it.

Tara:

Yep. So I think that's where it is a magical part. You'd have to turn it back on in order to change the program, if seasonal or you decide to make a modification. But again, it's a really simple flip it back and forth. We've done that on purpose, again, to keep the EMFs out. And there is device control. I think that's the other thing that makes it easy. So if say you've locked it down and you don't want to reopen it back up, it's a simple up and down button or turn it on and off. All of that's very accessible on the machine. You don't have to open an app to control it.

Dave:

I've seen one study that said that you needed to have warm hands and feet in order to go to sleep. It's very hard to go to sleep if those are cold. And seems like the hack that you've got, where you set your system up so that you're warm and you go to sleep and you just kind of melt, but then you get cool afterwards. Do you have any more information about hands and feet versus the rest of your body?

Tara:

Yeah, I think it's back to that spectrum. It's really easy to kind of get locked into one way of doing it. And I think your approach with biohacking is really ideal. You're the n-of-1, and what's unique about you is unique about you. And so for some people like me, warming up my hands and feet, yeah, if my feet are cold, I'm not going to fall asleep very easily. If I'm traveling, I have to put on socks, or whatever that looks like. But that's not the same for Todd. It's kind of like, he's not really affected by caffeine, or very little. He can have a pot of coffee and go to sleep. That's not the same for me. So I think it's about understanding what is the trigger for you. And temperature is really no different. We're a spectrum, just like morning people and night people. Whatever that is, there's a whole lot of us on this planet, and we all do sleep a little bit differently.

Dave:

Got it. So some people might want to sleep with socks, but if you warm yourself up, you're going to have warm hands and feet, and then cooling yourself down afterwards is going to make a lot of a difference.

Tara:

Yeah. [Crosstalk 00:19:20].

Dave:

In terms of going to-

Tara:

Oh, sorry. No, I was just going to say, it does trigger a cooling in your core body. That's really what happens, but there is a mental part for sleep of how we've used to fall asleep too. Sort of that nesting part does factor into the sleep, just beyond the mechanics of it.

Dave:

In terms of going to sleep faster, I found a couple studies that looked at lowering body temperature. One of them found, it was about 6.2 minutes, it was a Harvard study, instead of 20 minutes for the average person. So, there you go. You just got another 15 minutes of your life back, because you didn't waste time laying in bed trying to go to sleep. And in Japan, they found an average of 8.9 minutes by just dropping body temperature a little bit. So literally, going to sleep faster is something that just gives you time back every single day. And you could use that time to play with your kids or write a book, whatever you want to do. So I think that's a really big ROI for things.

Tara:

Yeah. I mean, we see that with our athletes. Back to the baseball players that are traveling a lot, a lot of them will even travel with the product in order to be able to help trigger that. But that is absolutely a gift. When you're on the road and you're not sure of all the other things, that consistent temperature for them is one of those triggers that, again, breaks the jet lag, resets you. Temperature is a re-setter for

your circadian rhythm. We just went through daylight savings time, which is terrible in general. But again, as far as how do you hack that, temperature is definitely one of those ways in which you reset that clock. It's a hard reset where it says, "Okay, now I need to go to sleep." We use it with healthcare workers in shift.

Again, some of the people with the worst sleep schedules are often the ones that are working the front lines in triage, and they need really great sleep. And they may sleep during the middle of the day. You can still trigger sleep with temperature, and that's, again, one of those magical parts. It works well for naps as well. It helps if you time after lunch, but you can use it for... Great for naps or weird sleep schedules too.

Dave:

We have this weird thing that happens with our sleep. Melatonin lowers body temperature, but lowering body temperature increases melatonin. So you can't say that one causes the other, because they both cause each other. It's kind of pushing on a string kind of thing. So what we found though is that for women in the luteal phase of menstruation, that melatonin doesn't drop body temperature, which is one of the reasons that sometimes you're a hot sleeper, sometimes not. What have you found about using ChiliSleep, the new Pod Pro, specifically with women at different phases of their cycle?

Tara:

Yeah, so controlling the temperature is magical. Hormones are one of those things that throw off temperature very easily. And us women, we really get the raw end of that deal, whether it's menstrual cycles, pregnancy, menopause, all of the fun hormone things that make us who we are also deliver a real rollercoaster when it comes to temperature. And so being able to manage that and have slightly different schedules even for those different times of the month, we have that flexibility of whether it's a day of the week and it's a work schedule, or if it's just want to sort of maximize what's happening with your menstrual cycle and help take out the symptoms.

So we just did a menopause study, and it really demonstrates the power of sleep. But if you don't wake up from hot flashes, if you're not waking up because of a hormonal change and you're too hot, all the other symptoms of whether it's PMS, menopause, hot flashes, pregnancy, even some of those are all mitigated by just sleeping better. Again, that power sleep that we talked about in the beginning is pretty magical if we can just have that off interval. If you think of sleep as the off interval, the healing interval, we have to have it. If we don't have it, things are just wonkier, no matter what they are.

Dave:

I think that's the case from everything that I've seen. And it may be that, for women, you just need to figure out kind of how you're feeling. Do I want it hotter or colder? But then you have to mess with it. So I would say that since melatonin doesn't work when you're in the luteal phase, you might as well chill a little bit more during that time, which is... What is it? About eight days or so, depending on an individual cycle, but that seems like a good place to start. And it's okay if you adjust it. And I do the same thing with mine. I'm already kind of cool. I don't really want to drop my temperature. So I might raise the bed temperature by three or four degrees, but it's still way below my body temperature, and it stays there. So I don't sleep with a consistently cold schedule. Now, one of the things that you're doing that's new with the Pod Pro is, you have some automated systems that will figure out the right temperature for you. Tell me how those work.

Tara:

Yeah. So again, this is really fun from sort of patent, and where did all that sleep research go? It's about timing that the future state, we will have even a sleep tracker coming out later this year. A lot of it is all about the accuracy of understanding what's happening when doing really accurate measurements. The sensors that do exist even in the machine are sensitive to temperature and ambient to be able to know what's happening. It also adjusts much faster in order to be able to react. So you touch down on your Dock Pro by 15, 20 degrees, and you're going to actually be able to watch the temperature drop. You could feel it on the pad, of it changing. For example, I keep a cooler house in the wintertime, because I just like a cooler environment. So when it goes to warm up, you can literally feel it go from cold to warm within minutes. It's a really fast response time, and that's part of matching it so that we can get the right algorithm. It has to respond fast.

Dave:

I'm really excited about more insights from automated systems on things like this. I believe that as we do more biohacking, we get more data about the human condition, we'll be better and better equipped to figure out, oh, this is going to work well for you. And I've built that into the algorithms for Upgrade Labs. Workouts for the same person shouldn't be the same every day, and recovery shouldn't be the same every day, and sleep won't be the same every night. So you're doing a similar kind of thing where you're saying, "All right, what's going to work better for you based on what we've seen so far?" And I think that's a big innovation in sleep. And here's the thing. You could be obsessed about, "Oh my God, I might have had the wrong temperature by two degrees, and what's going to happen?" That's just a waste of your time.

So you want to get it about right. But if you have a system that automatically improves itself over time, I think that's the way to do it, so that you can focus on other stuff that matters more. If everyone listening could spend zero attention to set up their environment so that they feel good all the time, I would love that. Just right now, it seems like the industry's going in the opposite direction. So I want us to bring it back and make it easy, and you're doing some really good stuff there. Here's a question coming in from our live audience, from Halle. She says, "Can I put it on top of my Essentia mattress?"

Tara:

Ooh, yes. We love as Essentia mattress actually. They're a fabulous mattress. It's one of our favorites, for sure. So yes, I have to say selfishly, without a shameless plug, that's what's in our house. So it already exists, and it works just great.

Dave:

It works just great. Is there any kind of mattress that you shouldn't put the Chili Pod Pro system on?

Tara:

No. We've really benchmarked it with everything. We've spent a lot of time in our lab really testing it. We've tested against different pressure, back to that urethane membrane. We've tested it for basically that elasticity that be able to respond to your body. It's got holes it so it's perforated, so it breathes. The breathability of the mattress is really important. You can't fully encase a mattress. It has to still breathe. That's how mattresses, at least of natural materials, are going to function the best. They'll sort of absorb your pressure the best when they can breathe, and the sides of our pad are fully breathable so that you can basically still sink into your mattress.

Dave:

Are you doing any kind of a trade in thing for people who have the existing system?

Tara:

We are. So I will have them reach out to customer service. So depending on whether you have one side of the bed or two, so for each unit, there is some part about age. So if it's less than a year old versus is more than a year old, but it's \$100 or \$150 per control unit. And the fun part is, if you like the service part, we are donating those. Generally, we donate them to veterans and first responders, but we are working on something with Doctors Without Borders to send some of these units to some of the tents and camps for Doctors Without Borders in the Ukraine, really Poland at this point. So more to come on that, but if you want to, they'll give you a return label and you can send your unit back, and it'll go to a good home no matter what.

Dave:

That is super cool. I love that. I want to thank you for being on here. And for listeners, you know that if I think something is worth your time on a show, I'm going to negotiate a discount for you. So how about 20% off. Humanupgrade20 is the code at chilisleep.com, C-H-I-L-I sleep.com. Humanupgrade20. 20% off is a big savings. And if you're looking to go to sleep faster, sleep maybe more in less time the way I do, this is a really cool piece of tech, and it is a really big quantum improvement over the existing system. I could not believe how quiet it was, and I like the programmability that wasn't there before either.

So this is the new gold standard, especially because it has airplane mode. Tara, thank you for sharing information about what you've been working on for years. There's lots of studies backing what we're talking about. And this is one of those things you install it, takes you a little while to do it, and it turn on at night, it just does its thing, and you sleep better. So it's not a huge investment of energy, like doing jumping jacks before bed, which would be a bad idea. So no effort required once it's installed. Thank you so much for sharing knowledge about something you can help her about deeply.

Tara:

Yeah, it was great to see you again.