

## THE STRESS-SLEEP CONNECTION THAT'S KEEPING YOU UP AT NIGHT – DR. DAVE RABIN – #885

Dave Asprey:

You're listening to The Human Upgrade with Dave Asprey. Today is going to be a lot of fun because I care very much about sleep and I care about it because I actually don't like sleep. I am opposed philosophically to sleep, just so you guys know this. I have been my entire life because there's so many other things I'd rather do. However, I very much appreciate what sleep does for me, so I'm actually a huge fan of sleep, but I'm a huge fan of sleep without a wasted second and that means understanding what are the inputs to the black box that is sleep and then what are the outputs we get and how do we manipulate the inputs? And what do we do when they're in there so that the outputs are epically good sleep in ridiculously small amounts of time? And that goal is one of the overriding things that can make you perform better.

Dave Asprey:

And just to underline that, I slept under... I slept under five hours a night, oftentimes only four hours a night for the first year and a half that I was starting Bulletproof. And I was working full time as a VP at a big company. Was I taking that extra time from restricted sleep and using it to great advantage? Yeah, I was. Was it good for me? No, it wasn't. However, if I'd have done six or six and a half hours with all the hacks I know now, I actually could have done that forever because I get six hours and 28 minutes and I have for the last eight years of measured sleep. So I think that works. But now we're going to talk about chronic stress caused by all sorts of things, including the media and sleep in humans.

Dave Asprey:

And we're going to talk to a neuroscientist, board certified, a psychiatrist, a health tech entrepreneur, and previous guest on the show. So MD and PhD, so barely qualified to be on the show, but we're going to let him through the door who studies stress enormously. We're talking about Dr. Dave Rabin, and it's always in order to have you on my friend. It's fun because you have a great and interesting mind and you make cool tech. So welcome.

Dave Rabin:

Thanks so much for having me, Dave. It's always a pleasure to be here with you.

Dave Asprey:

We're talking about sleep and stress, but a lot of people know you as kind of the psychedelic guy, because you're doing so much stress. And we talked about breathwork and psychedelics in our last interview and touch therapy and pain in the one before that, episode 729 and 730. So when we talked about having another episode, I'm like, let's switch gears, but can we still touch a little bit on the hallucinogenic space, the psychedelic space when it comes to stress management? Because I think there's a lot of interest in the audience.

Dave Rabin:

Absolutely. And I think the best way to start that out is to really think about from a 10,000 foot view of what health really means.

Dave Asprey:

Can we still touch a little bit on the hallucinogenic space, the psychedelics space when it comes to stress management? Because I think there's a lot of interest in the audience.

Dave Rabin:

Absolutely. And I think the best way to start that out is to really think about from a 10,000 foot view of what health really means. Health means the restoration and maintenance of balance for all of us. So if we are doing things in our day to day lives, whether they're breathwork, meditation, gratitude practices, thought exercises, any of the things that you talk about including and critically important is managing our sleep and our circadian rhythms, our sleep and wake cycles. It doesn't really matter what tools we use to facilitate access to that balanced state. It just matters that we achieve and maintain balance as much and as frequently as possible and then that is health. And so maintaining sleep and making sure we do things to have a healthy sleep rhythm is going to maximize our performance and energy availability during the day and psychedelic medicines and wearables can play as important a role in that for us as the day to day practices of breathwork and meditation, yoga, exercise and nutrition.

Dave Asprey:

I woke up at four this morning to give a talk to a group of entrepreneurs in India, which is really bad for your circadian rhythm, but they paid me a bunch of money to do it. How do I know how much money I should charge to ruin my circadian rhythm for a day or two?

Dave Rabin:

Well, that's an interesting question. I like the way you put that, because I think when you think about what it's doing to us to do that work, you're actually taking... you're thinking about a much fair compensatory strategy because it's not just that you're taking two hours of my time at 4:00 in the morning, it's that this could impact all the work that I'm doing for the rest of the day. And so I think if we can fit in those kinds of engagements, like the 4:00 AM lecture in India on days when perhaps we have the ability to shift all of our work to an earlier time or to shift our schedule or our circadian schedule a little bit so that we can make up for that lack of rest in rest later or earlier, then theoretically you could charge the same amount you'd always charge.

Dave Rabin:

However, if they say, no, we need you at this time and you can't reschedule all your rest of your life, then I think it's fair to charge a little more to make up for what you would otherwise not be able to do at your peak because of it. I mean, it makes sense, right?

Dave Asprey:

I think that you just taught me something. I'm going to add a 25% and I should have done this for this one, 25% off hours fee. So if you want me to stay up ridiculously late or wake up early... The worst thing too is bright studio lighting to look good. So if I wake up at 4:00 in the morning, I can't go back to sleep because, A, I had to have my brain on, but B bright lights. So then the day starts. In my case, I went and I did a whole bunch of biohacking and the extra time between that and when the day started, so I'm all charged up for the day, but I'm going to do that, 25%. So if you're a professional speaker, you're listening to this, there you got your value for the show today because you literally could just say, "Look, if it's early, it's going to ruin rest of my day. I'm charging it little bit more." And that's fair. All right. I like that.

Dave Asprey:

You talk about something else. I'm being a little greedy as an entrepreneur here because apparently according to some news sources, all entrepreneurs are greedy, bad people. According to other ones, the ones I read, we're actually solving problems that needed solving that no one else would solve. But regardless of your perspective, I'm going to be greedy now, because you talk about something called founders therapy for entrepreneurs. I haven't heard you talk about that before publicly, but I came across it in just my background check on this. What is founders therapy for entrepreneurs versus regular therapy for entrepreneurs?

Dave Rabin:

That's a great question. So they're really not that different. I think when we think of founders therapy versus therapy more generally speaking for entrepreneurs, therapy for entrepreneurs in general isn't really that different from regular one-on-one talk therapy. The major difference is that you have a therapist who is comfortable talking about business type stuff so that they can help sort through that with you. Founders therapy is more like couples therapy. So it takes the typical one-on-one business therapy to a level where we might meet one-on-one to talk about how things are going with you personally and in your business to try to optimize the performance and functioning of your business and your team, particularly for companies that are kind of in that valley of death region or they're well established and just trying to get to the next level and are struggling to do so because of any number of things.

Dave Rabin:

And it often involves bringing in other members of the leadership team. So members of the team that have been there for a long time. It's usually when there's two, three or four founders or people who have been there from the beginning and they all perceive each other to have different approaches or different visions for where their company should be going. And that's when you really facilitate kind of in a family or couples therapy kind of manner. You're really helping everybody see eye-to-eye about the future vision, where things are at now, how to jump off from where we're at, where we're going, what are the core problems that need to be solved? And you're really helping facilitate a listening exercise where people can listen to each other non-judgmentally. It's really similar to standard couples or family therapy. It's just that it has to be done by somebody who understands the nuances of being a founder themselves and being an entrepreneur.

Dave Rabin:

And I will say that one of my most favorite books ever, which happens to be on this topic is a book by Jerry Colonna called Reboot. And Jerry is one of the... Interestingly enough, the founder of Flatiron Cap, one of the founders of Flatiron Capital back in the day in New York City who writes reboot about his own experiences, overcoming his depression as an entrepreneur and eventually a VC. And he talks about his whole experience and coming to an understanding of how to cope and how to heal himself and come out on the other side as a more whole person, not having a therapy background. So how to do it just by figuring it out as you go and what kinds of resources and tools that you could come up with.

Dave Rabin:

And then he ultimately became known as the CEO Whisperer because he is the founder of the Reboot camp for entrepreneurs that can go in Silicon Valley and work with him at his facility and do group work

and individual work, which is absolutely incredible, particularly because he's not traditionally therapy trained. So it's very, very interesting work that I love to do.

Dave Asprey:

You're actually pretty knowledgeable as an entrepreneur, in addition to the MD, PhD and all those other little things like that. Your company, Apollo, which we talked about before that kind of replicates touch therapy with vibrational stuff. I've got my Apollo on right now. You just raised a bunch of money and the company is kind of killing it. What's going on with Apollo before we get into stress and sleep? I just want to catch up a bit.

Dave Rabin:

Sure. Apollo's going very well. We started, for those who don't know, we started selling the devices in January of 2020. We basically launched at CES of 2020, not knowing of course anything about what was going to follow with the pandemic. And then we, of course, had challenges like every other company with supply chain, but managed to sell to date almost 60,000 units in the wild. And we just closed to a series A, which is very exciting and things are really moving and we're really growing quickly as a company. It's been a challenge to triple your employees all remotely, as you can imagine, but Kathryn, my wife who is the CEO is really just an outstanding business mind and fundraiser and just a really intuitive manager and really spends a lot of time communicating with our team and making sure she knows what everybody wants and is in touch with everyone at different times. And together it's been really fun to work on this and to see it grow.

Dave Rabin:

We have a lot of exciting stuff coming out in the next few months and in '22 to share with everyone in terms of more personalized features like scheduling, which is very, very exciting where you can schedule a device to turn on automatically, which is one of my favorite new features coming out shortly.

Dave Asprey:

So I've enjoyed playing with my Apollo and I had one of the first prototypes. Thank you for that. The joys of being me means I get to play with all the toys before everyone else. And it would be really neat to just have it turn on without me having to do anything, so I could just say at this time I want to be in this state. So I like that idea quite a bit. But I got to ask, so do you and your wife go to founders therapy or couples therapy?

Dave Rabin:

Oh, that's funny. I really set myself up for that one, didn't I? So we actually both went to individual therapy because it's really, really nice to have someone... Therapy as a tool is really about having somebody outside of your immediate circle, outside of your family and friends who doesn't know any of your immediate circle and family and friends who you can talk to about literally anything that's going on in the old [Nagin 00:13:56] without judgment and just have like a reflection space, a safe reflection space. So I am a huge proponent of therapy and it was instrumental in teaching me how to personally become a better therapist. And so after having gone through that, I think it's really important that for all of our personal growth, particularly when we are often surrounded by people who are very judgmental, not because they're bad people, just because we were taught to judge each other very, very frequently as children growing up and we see judgment all the time that we forget that the most therapeutic thing about human interaction is nonjudgmental listening. It's empathic, non-judgmental listening.

Dave Rabin:

And that's what you actually pay for when you get a good therapist. So we actually, thanks to, luckily enough and due to our very convergent and divergent specialties, we don't really step on each other's toes with work, which is really nice. And both of us grew up in families where our parents worked together professionally.

Dave Asprey:

So you can pull that off. A lot of couples have a seriously hard time with it.

Dave Rabin:

It can be very challenging.

Dave Asprey:

I famously years ago, I think I've talked about this on the show before. Years ago, probably the first six months of Bulletproof, I fired my wife, like literally, "You're fired." And she didn't really like it at the time, but it was totally the right move and we actually work together now, but it took a lot of work and therapy for both of us, honestly, just to get an understanding there, but it can be really stressful. So it's interesting that as a trained therapist and people who are listening may not know, in order to be a trained therapist or psychiatrist, you have to do huge amounts of therapy yourself so you don't bang your patients.

Dave Rabin:

You used to.

Dave Asprey:

Oh, you don't have to anymore.

Dave Rabin:

And they changed that about most programs, training programs and the psychiatry world actually changed that a little over 20 years ago.

Dave Asprey:

Oh my goodness!

Dave Rabin:

And I strongly believe, and many of our colleagues believe that the lack of that self-work, that's encouraged, we used to be encouraged during training is actually probably a big part of why there are so many abuses in treatment these days, which is a huge tragedy and it's incredibly avoidable just by learning to leave your own baggage at the door, right?

Dave Asprey:

Yeah.

Dave Rabin:

Which is really what we're talking about. I think there's an Offspring song about that.

Dave Asprey:

Right. I would encourage people listening, find an older therapist or a younger one who's done a lot of their own therapy. It seems like a really just good, basic due diligence check because otherwise, it's natural when you work with people with that intense emotional level, you're going to have boundary crossings. It's a perennial problem in personal development workers and coaches and everything. It's why with our coaching program, there's a lot of conversations about that because you got to get your brain on straight for that. And just to be clear, guys, coaching is not the same as therapy. If your coach is trying to be a therapist, you got a problem with your coach and if your therapist is trying to be a coach, you're overpaying. Is that accurate? Would you agree?

Dave Asprey:

Coaching is not the same as therapy. If your coach is trying to be a therapist, you got a problem with your coach and if your therapist is trying to be a coach, you're overpaying. Is that accurate? Would you agree?

Dave Rabin:

Yeah. I think that's generally accurate. I think just to add to that, I would say that there are a couple really critical flags to pay attention to when you're establishing a relationship with a new coach, therapist or psychiatrist or doctor of any kind, anyone who positions themselves as a healer in your life that you are paying for. So number one... Or paying for or not paying for. Number one is you should absolutely feel safe around that person, meaning not judged. So when you're talking, you should feel that, that person's listening to you and not judging you. They should offer their feedback and what we call a reflection or some degree of interpretation if you ask for it, but they should not make you feel like you're being judged, number one.

Dave Rabin:

Number two is that you always want somebody who tells you that you are at the center of your own healing process. This is one of the biggest red flags that we see come up and it's one of the first things that people don't realize they should be aware of, which is that it, if your healer, your therapist, your doctor, your X, Y, Z, coach, social worker, whatever, tells you no matter what, or your psychedelic shaman tells you that they are responsible for your healing, it's time to find someone else, because that means that they're-

Dave Asprey:

[crosstalk 00:18:47] ego going.

Dave Rabin:

Exactly. That means that they are allowing their ego into the process so much that they are conflating the healing experience that comes from within each of us with their own facilitation and their own perceived power. And that is a recipe for disaster every time.

Dave Asprey:

And we talked about this on the last episode, but the number of people who've done three Ayahuasca ceremonies and hang up a shingle thinking they're a shaman, because maybe they grew their hair long or something. It takes a bit more than that to be a qualified shaman, especially with that plant medicine, which is as I... more of a downside than say mushrooms or something. So it's an interesting world out there, but buyer beware. And most people are going to these people because of stress, but I don't think we really have even a good understanding of what stress is. How do you define it? Because you have the medical side and the... Well, the kind of medical psychiatry side, medical-ish.

Dave Rabin:

Yeah, the whole shebang. I think the best way to define stress is that it is the unavoidable challenges that we face in everyday life. So we must admit to ourselves that there was stress involved in us getting to this point that we're at right now and at the same time, we also must admit to ourselves that we cannot avoid stress. Stressful things will always be around us, whether that's loud noises sometimes or flashing lights or traffic or our kids screaming or work related stuff or global disaster stuff. It's not going to be all of that at once, hopefully, but there will always be stressors in our lives. And the reason for that is because we require stress to grow. So stress is not bad because... Inherently. In and of itself, it's not bad because we require it to grow. We require the stress to help us learn how to overcome the challenges that are signaled by the stress to become better, stronger, fuller versions of ourselves.

Dave Rabin:

However, when that stress becomes too much for too long and it's too overwhelming and too hard to tackle, little parts of it or any part of it and we just become completely saturated with it and feel like we're chasing our tails in a circle over and over and over again, or put or like Sisyphus, right? Pushing the rock, the boulder up the hill and it's always rolling back down on us. Those are the situations where we start to see acute stress that can be healthy and very helpful to growth turn into chronic stress. And that chronic stress increases inflammation on a daily basis. It's that chronic stress that increases likelihood of disease, the way that our body doesn't function the way it's supposed to, when we want it to, decreases in immune system activity, increased chances of getting sick and the list goes on. Decreased fertility, increased anxiety, increased depression, all of those things come from uncontrolled, unmanaged, chronic stress.

Dave Asprey:

So now I'm stressed about stress. I'm also stressed about not getting enough sleep. So is there stressorexia happening right now where people are stressed about their stress?

Dave Rabin:

For sure.

Dave Asprey:

It's a serious question. I mean, I see this so much now in almost everything I'm not doing whatever it is right. What's going on with fear of stress.

Dave Rabin:

Well, so stress itself when it's chronic over time, when we're really like overwhelmed for a lot long period of time, our bodies become hyper reactive to threat or to things that could threaten us, including stress itself, including newness and change itself. So trying to change an old habit is never as hard as it is

when we're already exhausted, overwhelmed, stressed out. So that's why tells you when you're trying to build a new habit, try doing it and practice it when you're feeling good. Don't just wait until the time when you're feeling like shit. Otherwise, you're going to have a much harder time doing it. But at the same time, there's no reason to fear stress and to add additional threat onto what we're doing. The most important thing is to draw awareness to what we can control and what's within our ability to control.

Dave Rabin:

Because the more time we spend focusing on the things that we can control, like soothing touch, breathing, exercise, yoga, movement, things like that, ask for our attention where that's going, feeling of Apollo on our body, the more we pay attention to feelings like that, that are within our control, the more in control we feel more of the time, therefore the less anxiety and out of control we feel more of the time. So it's very much a fundamental balance that we are consciously in control of as soon as we take the proverbial red pill that is in our hands at any time and recognize, "Oh, just by being aware of my behavior, just by being aware of what's causing me stress, I can actually change how I react to it and what it means to me." And so psychedelics and wearables similarly can help accelerate or catalyze that process with the right guidance.

Dave Rabin:

But what you said is absolutely true in that right now, because of all the wearables that existed in gen one and gen two, which are the tracker wearables, people have actually gotten more sensitive to the stress itself because the wearables, their phones, their Apple watches, their Aura rings, their WHOOPs are all telling them, you are unwell, you're not moving enough, you're not sleeping enough, you're not getting enough X, Y, Z, and then says, now on top of everything else you thought you had to do, you also now have to do these things or you could die, or you could be really, really sick. And so it creates an anxiety around health that is actually the opposite of what we're trying to do for people, which is just make them feel a little better so they make better choices.

Dave Rabin:

So the whole idea of Apollo is can we take that data that we're getting from your Aura ring, for instance, or from your Apple watch and just help you use Apollo more regularly so that you are more in balance more of the time through your touch receptor system and what we've actually shown, which is really exciting in a recent study of 582 of our users who use Apollo and Aura ring together is that compared to a five month baseline of Aura health, data collected health data prior using Apollo, when you add Apollo, you see statistically significant increases in deep sleep, REM sleep, total sleep. And when people use Apollo consistently, we see increases statistically and clinically significant in all of those areas, including sleep efficiency, which you talked about earlier, and heart rate, resting heart rate and heart rate variability that are cumulative. They continue to go up over time in a-

Dave Asprey:

Wow!

Dave Rabin:

... a trajectory that is very similar to what you'd see from adopting a new exercise or yoga routine or meditation routine over that same three month timeframe. So what we're seeing is that it doesn't matter how you create balance. It doesn't matter how you balance this sympathetic stress response and

the parasympathetic recovery response systems in our bodies. What matters is that we achieve balance as quickly as possible and then repeat the actions that are going to help us maintain that balance as much as possible. And then that stress reactivity comes down and our ability to adapt to whatever comes our way goes through the roof, where we become impervious to threat. We basically create a force field of adaptability around ourselves. If you think about it, it's almost like channeling Bruce Lee's presentness, does that make sense?

Dave Asprey:

Absolutely makes sense. Are they wearing the Apollo just at night or wearing it all day? How often are they using it? Because it's not scheduled yet. How does all that work?

Dave Rabin:

So this is really interesting. So the people who had the best results, this 19% increase in deep sleep over three months, as little as three months-

Dave Asprey:

Significant.

Dave Rabin:

Very significant, 14% increases in REM, 11% increases in HRV and a 4% reduction in resting heart rate, these people are using Apollo both day and night for three or more hours a day. So they usually have it on sometime in the morning on an energizing mode, and then sometime at night on a sleepy mode and that helps balance circadian rhythms, like we were talking about earlier, gives you energy during the day, allowing you to use less stimulants and then gives you, will wind down at night, allowing you to go to bed without as many sedatives so that you feel more jazzed during the next day and every day after that. And then we're seeing this about five or more days a week. So these people who are using it consistently in this manner are the ones who are seeing these very dramatic improvements in their biometrics over time, which is very exciting.

Dave Asprey:

Okay. So they're using it a lot. I mean, three hours a day is quite a bit. If you don't turn on scheduling, I'm probably not ever going to do that because it seems like too much work to think about it and I think you're going to need a bigger your battery too because, what you have to charge every day if you use it that much?

Dave Rabin:

No, you can get... I get three days out of it using it that much. So if I do-

Dave Asprey:

You mean three... Okay.

Dave Rabin:

Yeah. So if I do three... So you'll have scheduling in two weeks, by the way, so it's right-

Dave Asprey:

Ah, good deal.

Dave Rabin:

At most, it's right around the corner. So when-

Dave Asprey:

I should be in your beta program, I should be in test flight man, come on.

Dave Rabin:

As we were talking, I was like, why has Dave not been testing this? You will be in the beta program from now on. I assure you.

Dave Asprey:

I was just looking to see if I've got levels beta, I've got happy beta, I've got sleep space beta and I'm like, where's the love, man?

Dave Rabin:

You know what? For some reason we just didn't connect around that, but you're in from now on, you're in. But the scheduling is cool because what I do is I set it in the morning to be on and I set an afternoon mode and then I set an evening mode and that's already my three hours and then I'm good. I just have to wear it on my body. Don't even have to go back to my phone unless I want to look at my data or change something. But it really does help with the consistency and that will get even more personalized over time as well.

Dave Asprey:

All right. I like that. We've got our upgrade collective. This is my membership and mentorship group that live audience and one of the guys Larry's like, hi Dave, I got to test it before you did. So the people in my program are getting it. Dave, I'm not feeling the love, man. I'm not really feeling the love.

Dave Rabin:

Well, so what we did is we put out... You probably didn't see the email. We invited you and everyone who-

Dave Asprey:

That's likely.

Dave Rabin:

Yeah, you were definitely invited because we created a beta registry and I should have just reached out to you personally, because I should have known that you probably weren't going to see the email, but next time-

Dave Asprey:

Now, I'm feeling judged.

Dave Rabin:

... I will make sure you're on there. No, you're just too busy. We're all so busy. I'm not going to expect you to read every single Apollo newsletter that comes through. I'm just going to reach out to you next time and get you plugged in right away.

Dave Asprey:

I probably will respond to a text message more than an email, but I think a lot of people are that way, but then again, you're a busy guy too. You're an entrepreneur and you're doing a lot of work with psychotherapeutics and all. So I'll take responsibility for not doing that.

Dave Rabin:

We'll make it up to you.

Dave Asprey:

One of the sources of stress though is that, and I can tell you, I have zero email stress because I have an assistant. I'm like, could you tell me which ones to look at? And by the way, can you be on the phone when I look at them so I can tell you what I want to do about it? I don't even have to write the email. So my life is much better. And then she puts them into, like look at these sometime kind of things. So my stress there is gone. My WhatsApp and text message stress has gone up because there is no way to send those to an assistant. I just copy and paste those into an email. I'm like communication stress, if you're trying to stay focused on something is a massive thing. What do you do about that? Is there an Apollo setting to stop tweaking on email?

Dave Rabin:

Well, I think the first Apollo setting is try to make your communications as efficient as possible. So as you were saying earlier with sleep, right, it's not just about getting more sleep. It's about increasing the efficiency of highest quality sleep, the deepest most restful sleep. So if you think about it, the reason why we struggle the most to fall asleep is not because of sleep itself. It's because of that transition period between getting from wide awake to asleep or to deep sleep, which is our most restful stage of sleep. And so what breathwork, soothing touch, meditation and Apollo do is they give you the benefit of smoothing out those transitions and making the transition period more seamless. And so what we recommend for people who are trying to improve the efficiency of their communication work like text or email, is that part of the reason why we struggle is because going into the experience, having to answer a bunch of emails or answer a bunch of text messages or WhatsApp or whatever, or socials in general can be stressful itself because sometimes there's parts of us that don't want to do it.

Dave Rabin:

So if you can smooth out that transition and quiet the voice a little bit in our heads, by bringing our minds back into our bodies and just being present with the task, rather than thinking so much about why we don't want to be doing it or why we'd rather be doing something else, all of a sudden the task becomes that much more easy and kind of fun. And so Apollo helps, by setting it to, for example, social and open, which is my favorite for... or clear and focused if I want to be like really zoned in, I have to write longer messages to people that are more detailed or more research based, one of those two modes I set right before I start, and then I'm just in the zone typing away. I just churn out. I spend an hour on it. I've gotten through everything.

Dave Rabin:

Sometimes I get through it quicker than I thought. And then after that, I'm onto the next thing without even really thinking about how much I don't want to be doing it, which I don't, but I do it. And just being in the moment and letting go of that resistance, my efficiency goes way up.

Dave Asprey:

Up. So self-deception is basically the key to happiness?

Dave Rabin:

I would say it's the opposite, but I like where you were going there.

Dave Asprey:

"No, I really like doing email because I'm so relaxed." No you don't. I'm kidding. I find nicotine helps if I have to do email chocolate-

Dave Rabin:

For sure.

Dave Asprey:

... coffee, anything that raises dopamine, Depranil. Oh, I haven't done my Depranil for today. I should take a couple drops.

Dave Rabin:

But on to that point, I think the original self-deception is that things should be different than they are. I have to answer emails right now because that was a commitment I made to myself and other people that I would be answering their messages. If I want to go back on that commitment, I can do that, but the point is I couldn't be anywhere else than I am right now, based on the choices I've made up until this point. So if I wish or spend a lot of time trying to wish or hope that things were different or change things in the past, then I'm pushing the rock up the hill, rather than just diving in, doing what I have to do now, and then maybe making a different set of decisions between now and the next time that changes what I have to do with my emails and texts if that's possible. Does that make sense?

Dave Asprey:

It makes sense, but things should be different than they are. That's why you started Apollo. That's why I started all the companies that I've started, it's why I'm doing Upgrade Labs, because things are actually stupid and it hurts when things are so stupid. So you have an innate desire to make them better than they are. Do you not feel that when you're communicating and doing those trivial little tasks? For me I'm like, this is not moving the needle forward enough. I think shouldn't be like this.

Dave Rabin:

Yes. As a similar kind of thinker to you I think that all the time. At the same time, I guess what I'm trying to say is that thinking about that while I'm doing the task that I need to be doing takes attention away from the task itself. So-

Dave Asprey:

A lot of focus for people.

Dave Rabin:

Right. And then that makes the task harder for me because I'm less focused and more distracted and then I feel worse about doing it. So I take that time to reflect on how I could make the process better and more enjoyable, but I try to do that before and after not during.

Dave Asprey:

Okay. That makes sense. I'm having some thoughts though. If I put like 50 Apollos in my chair or just attach my Apollo to a larger transducer in my chair, could I have an Apollo chair?

Dave Asprey:

Can I have an Apollo chair?

Dave Rabin:

You can you do that. So yes, these are all thoughts in the pipeline. It's easier than it sounds on the software side.

Dave Asprey:

It's quite easy, yeah.

Dave Rabin:

Yeah. On the software side, it's very easy. At this point, we're trying to figure out who are the best hardware partners to do that. Interestingly enough, it doesn't need to be so immersive. And I think the thing about the vibration is, from Apollo, is that Apollo is about helping us be more present. At least in its current iteration, everything we're talking about this entire conversation has been about how do we be more present? How do we center our minds? Which could be anywhere, past, present future, and bring them back into our bodies, which are always in the here and now, so that we can have all of our faculties available to us in the moment right now. I can perform at my peak right now or recover at my peak right now, because everything about me as much as possible is in the now. So if Apollo is more immersive, it can create very enjoyable experiences, very deep and intense experiences. Even altered state experiences that are very, very powerful, like a sound bath. However, that's a different kind of experience than what the current device is intended to provide. So of course-

Dave Asprey:

Because your acupuncture and acupressure points that are specifically stimulating parts of the nervous system versus whole body. The reason I'm asking is because you've told me all the good things, but I'm just imagining... Okay, I'm negotiating across from someone say from a three letter agency, a big pharma company or any government, whatever and they're in my office. So I put them in the Apollo chair and I put it on the feel like shit and be stupid setting. So then they sit there, like I have no idea why I just actually took liability for my own products back on to myself. It's almost like there was this weird vibration and I just had to tell the truth. So is there like a tell the truth, stop being a douchebag vibration that we could use on unknowing people who deserve it? You have to know what this is.

Dave Rabin:

Wouldn't that be interesting, right? It might be the brown note.

Dave Asprey:

Oh, brown noise?

Dave Rabin:

No, I mean, this is a really interesting topic. I mean I think the short answer is we don't know.

Dave Asprey:

The CIA knows. You know they have to have done all this research already.

Dave Rabin:

Well, we certainly know they've done a lot of it. I mean, I don't think from what I've read, at least I haven't seen anything about a vibration pattern that makes people tell the truth more often.

Dave Asprey:

It's very hard.

Dave Rabin:

I think that's a little challenging. I think that what does make people tell the truth more often is trust and feeling safe-

Dave Asprey:

To trust in the vibrations.

Dave Rabin:

And trust in the vibrations and their source, but also trust in themselves that could be evoked by the vibration. So for example, this is... I'm going to state a really common example of what you just said here. You're feeling like shit. You might be kind of guarded. You've had a really rough day. You don't really want to talk to anybody about your day because it's going to make it worse and you feel awful and you didn't sleep well last night. All of a sudden, you're leaving work and you are stuck in traffic. You get to your dinner meeting with your family or with a friend not work related and you still feel like shit. And you walk in that door and all of a sudden your favorite song is playing on the radio.

Dave Rabin:

And all of a sudden everything in our bodies just kind of deescalates and settles down. Our thoughts slow down, our heart rate comes down, our blood pressure comes down, our breathing rate comes down and we're fundamentally in those situations able to be more ourselves and more honest with ourselves and with others around us because the ambiance of the environment has created a soothing, trusting experience.

Dave Asprey:

So that's the sort of thing at Upgrade Labs at the coffee shop. People don't know I've changed the air. I've changed the water. I've changed the electrical grounding. I've changed lighting so that it's more

circadian compliant and of course the composition, so they have no idea, but they feel good when they're there and so they want to spend more time there, at least that's the plan.

Dave Rabin:

Exactly.

Dave Asprey:

It's the same thing. So when people are relaxed they're... Okay. So you don't have like the death ray of vibration identified yet?

Dave Rabin:

Well, we've heard about that with the recent stuff in Cuba, right? People, and I think-

Dave Asprey:

No, that's a fair point.

Dave Rabin:

... [crosstalk 00:40:24]. They're talking about really messing people up with sound waves and it's definitely possible not at the range that we work in. We work in the very gentle range, but there are, of course, others that are working and study every kind of stimulus for distress as well unfortunately.

Dave Asprey:

So it's like sound waves for when polonium just isn't enough?

Dave Rabin:

Dave too soon. Is that too soon?

Dave Asprey:

Okay. If you guys ever seen polonium, is a very hard to produce radioactive element that kills people slowly and in a mean way. So if you were a large government somewhere killing people with that, you would tell people who you were without telling people who you were almost like a TikTok meme, but with assassinations. It's pretty dark. So anyway, that's where that joke came from.

Dave Rabin:

If you didn't laugh, you'd cry.

Dave Asprey:

Exactly. It's an interesting world out there. We'll put it that way. So when people are feeling lots of stress about the state of the world, the fact that it used to be easy to fly somewhere as if taking your shoes off, wasn't already stupid enough. Now you have to have like a bevy of signs, all saying the same thing and a bunch of people doing all sorts of strange chicken dances in the hopes that it'll protect them from something that probably isn't there anyway. In situations like that. But that's not to say that there is no such thing as viruses. There is such thing as viruses, that's very clear, but I'm just saying that we're overreacting and that stresses everybody out, even people who are feeling safer and not feeling safer or

feeling frustrated, it feels like the stress levels have doubled just because of increased friction in our daily life.

Dave Asprey:

Is something like the Apollo enough to balance things out, or is this Apollo plus breathing plus every weekend smoke and feel like... What's the fastest path of just not being so bothered by all the stupid crap happening?

Dave Rabin:

That's a great question. I don't think there's any one thing or... Think about it like tools in a toolbox, right? If you're trying to fix your car... We are extremely high performance vehicles, if you think about it that way, that there's no one single tool that's going to fix it. We need to use all of our tools that we have available to us and to become aware of them, to train ourselves how to use them and to use them wisely. And so Apollo was... The best tool, by the way, just backing up for a second is breathwork. Breathwork and exercise are the two best tools, mainly because they go really well together. And when you combine them together, sometimes we call that yoga or movement meditation, or what have you, qigong, tai chi. Any of these other things are really, really credible ways to maintain our health and they're available to all of us. So I will always endorse those over any other thing first that we would add to our bodies from outside.

Dave Rabin:

And then of course, in addition to that, nutrition is critical. Soothing touch is critical. Being around people we love, that love us, that don't judge us all the time, that listen to us when we need to be heard and make us feel heard. All of these things are critical. Feeling like we're all part of something bigger than just us keeps us in check. So all of these things are tools and ways to look at the world that are critical for us to get through this very challenging time that we're all in right now. I think the other thing that's really important that we often forget is that this isn't personal. I think there are personal things that we can do to make our lives and the lives of our loved ones better. There's no doubt about that, but when bad things happen in the world, it's not personal.

Dave Rabin:

And Don Ruiz Miguel wrote this great book called The Four Agreements where he talks about basically in short the four agreements that we make with ourselves to maintain health and balance in our lives, which are don't take anything personally, don't make expectations, always do your best and always be true to your word. And I think these four agreements are absolutely essential for all of us to remember, particularly at times where we're really struggling, when we were around our friends family who are struggling to make sure that we are doing what we can to not step into the bear trap, right? We know the traps are there. We know stress is coming. It's not about avoiding, of trying to avoid the inevitable is a practice in futility. It is literally putting your head into the bear trap. Why would you do something that you know is going fail? You can't escape something that is inevitable. What we can do is we can focus as much time as we can on maximizing our abilities to adapt to the inevitable. That is what makes us strong. That is what makes us powerful.

Dave Rabin:

And when you actually look at... And unlocks our power, full power as human beings, and when you actually look at the neuroscience, so you look at the way that our brains are structured in their evolution

from ancient mammals, this couldn't be more clear and consistent, which is that the emotional cortex of our brains is bigger than any other animal and our strength is collaborative adaptation. That's what helps humanity overcome the greatest challenges that we face for thousands and thousands of years is not just our ability to adapt as individuals, but our ability to adapt collaboratively. That's the strength that we need to be reminding all of us about, each other about right now, more than anything else, because that is how we get through this.

Dave Asprey:

So the collaborative side... That probably reduces stress too. In fact, I talk about the 4F model that's emerged from distributed system, algorithmic stuff inside the human body. Fear comes first. It's a stack rank thing, fear, food... We'll call it fertility, but it's actually the other F word, but then friend. And you've got to have these things. It's a little different than Maslow's hierarchy of needs, because it's how you process reality. But if you have too much fear or you don't have enough food, or you're worried about it, you end up wasting energy in each of these buckets more than you should and not being present equals lots of fear. And so that's just going after the first F word, but it feels like when people don't have enough companionship, whether it's the fertility related or just friends that generates its own stress as well. So it is in the hierarchy of needs.

Dave Rabin:

Without a doubt.

Dave Asprey:

When people are feeling really lonely, does something like the Apollo or the other things you just talked about: breathing, exercises, yoga, whatever. Does it help with loneliness?

Dave Rabin:

Yes, because loneliness is one of those fundamental triggers of our stress response system we were talking about earlier, but it doesn't have to be, because being alone and lonely are different. Being alone is... And how we use language. I'm going to digress here for a second because how we use language and the words we use literally create the reality that we live in and it creates the meaning around the reality that we live in, which is our consciousness. So if we don't choose our words carefully, or we allow others to choose our words for us, then we are living by their definitions of the world. So this is a very common, the loneliness and alone thing is a very common misconception because being alone is actually useful to us.

Dave Rabin:

Being alone means being physically by ourselves, without others around us. That's actually our prime time for self-discovery, self-growth, self-development. This is time for us to go inside and to focus on our own and to build up our bodies and strengthen ourselves in all ways that we can't do as easily when there's others around that are distracting us or there's others around that have needs that we are trying to fulfill for whatever reason. That being said, loneliness is the emotional attachment of a fear of loss of community to being alone. Which is generally not the case. Usually what happens is we're physically alone, but we have people we can call at any time. So we don't necessarily want to mix up the two because they're not the same. Most of us are generally alone and are in a position that is where we have people we can reach out to at any time and they're there. They're just not with us right now.

Dave Rabin:

So if we remind ourselves that we're safe with some self-touch, some breathwork, some exercise, throw your Apollo on. It reminds you that you're safe, where you are right now. Then you can feel more comfortable to go in, engage in your recovery or performance practice and be present with what you're doing, not thinking about how you've been abandoned by your community or not thinking about how you might lose someone close to you when you can really... Because you know you can just pick up the phone and call them at any time.

Dave Rabin:

Loneliness however, is actually triggering that survival sympathetic system, which we want it to do when our community is actually threatened. But for most of us, that's not the case most of the time. Does that make sense?

Dave Asprey:

It does make sense. So we might feel our community is threatened, but it's not or right now it feels like community actually is threatened because free association and being within six feet of people and seeing faces are kind of aspects of community as I have always defined it. So there may actually be legitimate threats to it. Does Apollo help people stay calm in the face of actual real threats?

Dave Rabin:

Yes. So that's a really hard study to do, but from many self-reports, what we've seen in people who have had trauma is that they don't just feel threatened all the time, but they respond to actual threats slower because they're not present. They're living in the past traumas. So by not being present when threat actually comes that they need to respond to, they actually respond on a slower rate, which decreases the rate of getting out of it intact in one piece. And so whether you're doing breathwork, soothing touch, Apollo, all of these techniques are actually very effective at settling the stress response systems so that we can listen. And when we listen, we're more aware of our environment, we make better decisions and we get out of the way of threat more quickly in advance.

Dave Rabin:

So if we think about the stress response system, the sympathetic fight or flight system and the parasympathetic system, the recovery rest and digest system that the sympathetic stress response system is triggered by fear or perceived or actual threat and it is the system that is focused on doing things, doing things outside of the body, actions that are relegated by their ability to prolong our survival so that we can reproduce once we get to safety. The parasympathetic system gets triggered by safety and is actually the listening system more than the doing system. So it involves a lot of things happening in our bodies, but by way of knowing that we don't have to act in the interest of survival right now, because we're safe. All of a sudden, rather than doing things all the time, I can actually just take a seat and listen to what's going on around me to make better decisions.

Dave Rabin:

And so that's why we want health, which is balanced between those two systems so that we can be at our best when we're not under threat and actually appraise threat accurately so that when we are under threat, we can have the best chances of overcoming it and coming out the other side ideally stronger than we were when we started.

Dave Asprey:

Okay. I certainly like that perspective. It reminds me a little bit of... What's his name? Lieutenant Colonel Grossman who wrote on combat and on killing, which are some dark titles, but some of the most interesting books I've ever read about the neurology of first responders and what happens in those things and it turns out that even when you're very highly trained, you still go into a stress response, but they can go into it quickly, then they default to training, but then they can come out of it and there's coping techniques for that. Have you looked at using the Apollo in first responders or people who are in really stressful work environments where they have to do stuff like that? Do you see a difference-

Dave Rabin:

Oh yeah.

Dave Asprey:

... in their performance?

Dave Rabin:

Yeah, absolutely.

Dave Asprey:

What do you see?

Dave Rabin:

We had many first responders use Apollo on the order of hundreds at this point. And we have multiple clinical trials in frontline physicians working with COVID and non-COVID patients alike. But overall, so far the most exciting results that we've seen are people... It's hard to measure performance in these situations. We're doing the best we can to do that, but we don't have that data back. The data we do have back is that people are using Apollo on average are about 40% less stressed out when they use Apollo in these situations than when they don't.

Dave Asprey:

Wow.

Dave Rabin:

So they're just by nature-

Dave Asprey:

So it can handle more.

Dave Rabin:

Yeah. Just by nature of ramping them up, themselves up more easily and then helping them ramp down more quickly after the stress is over they sleep better and therefore they adapt better and they feel better on the long term.

Dave Asprey:

One of the things I'm becoming more and more convinced of after writing the books and doing all the research, the stuff I'm seeing at Upgrade Labs and 40 years of Zen and all is what I'm calling slope of the curve biology, which is that the body's ability to rapidly enter a stressful state and then rapidly exit the stressful state is way more important than the amount of time you spend in a stressful state. And this is true for muscle. It's true for cardio. It's true for meditation, almost anything. It's like, what's your switching speed and how fast is that? You train that and you train everything else automatically. Whereas what we're seeing is, well, if you just turn the lights on and leave them on all day, you're burning lots of calories, but it turns out flipping light switch on or off 10 times might be a lot better training and then you have the rest of the day free.

Dave Rabin:

Couldn't agree more.

Dave Asprey:

So you're seeing that just from a psychiatry perspective and from an autonomic neuro system perspective, it's the same thing?

Dave Rabin:

And we see the same thing from our work with elite athletes and our work with elite military folks. It's the same thing. None of us can sustain peak performance indefinitely without balancing that with peak recovery and switching. That's what allows us to switch back and forth. If we only have peak performance and focus on that only without allowing ourselves the peak recovery time, we all will burn out eventually. It's not a matter of if. It's a matter of when. So we must, if we want to maintain. And even if we want to know what our highest potential is in terms of performance level, it is imperative that we prioritize recovery equally to performance. And that doesn't mean it has to be the same kind of recovery stuff everybody else does. It's personal. What works for you may be very different than what works for somebody else, but we still have to prioritize it nonetheless.

Dave Asprey:

Okay. I like that. I am predicted that over the next five years, in addition to certainly the stuff that we're doing at Upgrade Labs for strength and cardio using that principle, that we're going to see big changes in neuroscience, like the speed of trauma healing and release based on those same principles. And I'm working on some stuff with neuro feedback on that as well. There may be like a rapid onset, more rapid vibration up front, and then going into the state to play with like ramping up more quickly, but there's something about that that is biologically unique, that is going to unlock a lot of recovery for people and a lot of just more stimulation and less time equals time saved.

Dave Rabin:

Exactly.

Dave Asprey:

Have you seen any research that's encouraging in that direction other than just... In general, you agree with the principle, but have you seen stuff around vibration?

Dave Rabin:

I haven't seen that much around vibration yet other than on what we've been doing. I think that there is a lot of... There is a lot of evidence to support what you said earlier, which is this idea of switching more frequently between states trains our ability to adapt. And the more we train our ability to adapt to switching states, then the more quickly we can switch states and achieve very high levels of performance and then recover very quickly. And this is something that's often trained in elite athletes, but we actually got this in training in medical school because, in medical school, you might be... You're on call all the time. You have your pager and you might see your 20 patient or more 50 patients in the morning and then you're in a couple surgeries. And then you have like a couple hours where you might not be needed right then, so you got to eat and then sleep as long as you can and then be ready so that when you get called, you can jump right back up and go see somebody who could be dying in that moment.

Dave Rabin:

And you just don't know what you're going to find sometimes and so you have to quickly turn on and quickly turn off, which I think was invaluable to my ability to get to where I am right now, because it wasn't that pleasant at the time, but it really did train me to be able to just shift states to basically meet whatever the demands of the situation were. And I think that is just an incredible skillset that if I had... I learned that as an adult, but if I had learned that as a child, it would've been so much easier to do as an adult. And I think we could really teach this to kids much more effectively just by starting with breathing.

Dave Asprey:

Oh, so you start with breathing. Yeah. I'm married to a former ER doctor and yeah, the ability to just go into emergency mode. I've seen it a few times. I go, "Oh, that's impressive." Just with a switch and just go right in. So trainable and breathing. All right. That's cool.

Dave Rabin:

Yep.

Dave Asprey:

Awesome. Well, I'm always intrigued to just hear what you're thinking about what you're working on and the new study on sleep is kind of ridiculous, the idea that you're getting a 19% increase in deep sleep. For me, that's the second highest of any intervention that I know of. Actually, maybe third highest. The first intervention would be don't eat right before bed. If you do that, you will not get deep sleep even if you use the Apollo, you might still get some deep sleep improvement, but it won't be the same. It's like a large meal plus Apollo is better than nothing, but the large meal is a giant smack in the face, right?

Dave Rabin:

Right.

Dave Asprey:

And then for me the-

Dave Rabin:

Same with alcohol, right?

Dave Asprey:

Oh, of course. With alcohol. So meals and alcohol those would be too... Don't do those, if you care about deep sleep. And then I have seen in my case, a doubling from wearing the TrueDark lenses, but I may be an outlier, but I do know it makes a difference specifically on the deep side. And then 19%, which is a shocking improvement from Apollo is very, very highly ranked in all of the possible things you could do. So I'm blown away by that. And then increasing REM is actually harder than increasing deep sleep. By the way, guys, if you go to [sleepwithdave.com](http://sleepwithdave.com), that is my sleep challenge, where I teach you how to do all of my weird sleep things I'm talking to about in rapid pace with Dave here. And by the way that sleep with this Dave, if not that Dave, in case you were wondering.

Dave Rabin:

If you're lucky, maybe they'll get both of us.

Dave Asprey:

There you go. Right. Everybody wins. But getting a REM sleep increase is shockingly difficult. There's some things you can do a temperature on the bed we've talked about and there's some things you can do with a certain lion's mane mushrooms and things. Otherwise, I've never seen anything that increases REM very well. For some people altheine, but a 14% increase is super cool. So that's a reason to use Apollo and then getting more sleep. That's an issue for half the people I talk to and HRV up by more than 10%. All of these are... Holy crap! And I didn't have to do a lot. I just wore a thing on my wrist-

Dave Rabin:

Or ankle.

Dave Asprey:

Got a question for you. I was going to say-

Dave Rabin:

It's autonomic toning, right?

Dave Asprey:

Is ankle better because the old band I have... When you first sent it, I had the wrist band on, but I have the ankle... Or I had the ankle band on. Now I have the wrist band on. You said before wrist or ankle is better than wrists, but how many people are ankle people versus wrist people, do you know?

Dave Rabin:

Yeah. So I think it's split roughly 50 50 across everyone. People choose one and they tend to stick with it. I think, however, for the people who use Apollo predominantly for sleep, I think it's like 65% use it on the ankle because if you sleep with Apollo on your wrist, for some people it's too close to their head or their partner's head. And I use Apollo on my ankle pretty much religiously every day and I have noticed a dramatic improvement over time. I never really had sleep issues, but the ability to quickly transition from state to state, particularly into deep focused states and also to be able to manage my own social anxiety that I used to have during public speaking. Now I don't anymore because I just realized that I don't need to spend my time thinking about what the person I'm talking to or the people I'm talking to

think about me because they are here to talk to me, so I should just be present with them and not in my own head, because that just takes away from my ability to perform in the moment.

Dave Rabin:

So I think that the ankle is equally valid. It's really just personal preference. The most interesting part that I'll correct you on that you mentioned earlier is that Apollo actually works anywhere on the body and it is central. So it can work on the... The strap allows you to attach to your arm, wrist or ankle, but it works on your... Back of your neck is very powerful, center of the chest is very powerful. Any dense bone transmits the low frequency sound waves more effectively and it is actually a central... It's a central nervous system effect that's delivered peripherally. So it is actually impacting the entire central nervous system similar to the way that somebody holding your hand on a bad day would make you feel in that it calms your whole body, not just your right arm or left arm.

Dave Asprey:

So it's more important to be on a bone than on a nerve center?

Dave Rabin:

Right.

Dave Asprey:

Interesting. I would've predicted that if it wasn't on your wrist or somewhere that you might want to put it more in the perineal region, for lack of a better term for that.

Dave Rabin:

You're not the first person who thought that.

Dave Asprey:

But the vibrations wouldn't go high enough for it to work. They're very subtle vibrations, guys, but what I'm thinking though is because of the bone sort of having effect throughout the body, probably I'm going to guess on mitochondrial membrane, but you don't have science to support that yet. Right?

Dave Rabin:

That's a big trial. So the biggest trial that we have that we'll start to look, not at mitochondria, but at the multitude of inflammatory cascades and also start to look at the epigenetic milieu of what's happening to the expression of stress response genes and also to the microbiome, excitingly, is a study that is kicking off recruitment in... Should be January at the Denver VA with veterans with PTSD, looking at them before and after six to 12 weeks of Apollo use, which is very exciting. But we don't have any of that data at this point. What I can tell you is that bones our very... big bones, especially, like our light bones in our legs and our arm and our chest and our skull are extremely sensitive to low frequency vibration, low frequency sound, which is why, if you've ever been to a live music show, it feels better than listening to your headphones it's because... Or listening to the music in your house, because the vibrations that are coming from the speakers at a live show are literally vibrating the bones in our bodies.

Dave Rabin:

It's hitting a resonance frequency that is much lower than those of our ears. And it creates a very soothing sensation in our bodies. It's almost like being swaddled by sound. It's like an adult... So Apollo in that same frame, it's almost like an adult [snu 01:05:25]. It's like something that you can put on your body that when we haven't necessarily learned the ability to self-regulate in the moment, you can deliver these low frequency vibrations that the bones are more sensitive to than the skin itself actually that resonates throughout the entire body all the way up through the entire skeleton to the emotional cortex. That's why it's not just local, which is really, really interesting.

Dave Asprey:

That is interesting and it matches my experience. That's why you have this sound bath and, yeah... Having good subwoofer is just a requirement.

Dave Rabin:

For sure.

Dave Asprey:

But you explained the mechanism for it. Well, one more question. So I always think of the weird stuff. So in honor of doing a great interview, I put a nicotine patch on my wrist right here and I'm wondering if I put the Apollo on top of the nicotine patch, will it go in faster?

Dave Rabin:

I have no idea. You could let me know. That's an interesting experiment.

Dave Asprey:

It probably will do something good. It would be my guess, but I don't really know. Now with that as a final ridiculous question, guys, [apolloneuro.com/dave10](http://apolloneuro.com/dave10), is where Dave's been kind enough to offer all listeners of the show a 10% discount. And I run across so many pieces of tech. I mean, I have on my desk right now, eight of them, and I get to play with them all and the vast majority of them, I don't think the ROI is there, like the return on investment for you from the time you'll spend on it and the effort and all. So if you have to spend a half hour focusing on something that's very different than I put it on my ankle and I turned it on and then suddenly I got 19% better deep sleep. This is a pretty high return for a small amount of work, which is why I'm really intrigued by the Apollo.

Dave Asprey:

And also, I think Dave's very credible in terms of his research background, medical doctor background. And frankly, you can do whatever you want to do in terms of psychedelic medicine, there's all kinds of stuff. So the fact you chose to do this in my mind points to it as being something that's worth spending some time on. And that's something that... You guys have to look at this. So someone's like, "I'm going to go get rich on this or find there's lots of things. Start an insurance billing company." Good God! But instead you're saying, "All right, you could do whatever you want. This is the thing." So the science is there. You run clinicals at the very highest level and it actually works. So it's cool. [apolloneuro.com/dave10](http://apolloneuro.com/dave10).

Dave Asprey:

And Dave, it's always a pleasure to have you on. Anytime you want to come back, this new study on sleep has me very much intrigued. I'm going to up my usage and be more consistent and tie it in with my Aura and see what I can find.

Dave Rabin:

That's great. And we'd love you to share your data with us and anyone listening as well is welcome to join our sleep study. The results I gave you are just from ongoing from the first round of analysis. We actually have three times that many people now, which is about 1,500 and we're expanding to 5,000 over the next two years. So if anyone is listening, has an Aura ring or wants to get an Aura ring and Apollo and participate, you can actually sign up directly on our website in the sleep study section of our blog, the Apollo Sleep Study. And we also have a list of all of... Or most of our ongoing studies are going to be listed. We just had about, I think, six or seven studies of IRB approved, which is very exciting and more studies with data coming out as we work from the different university studies that are going on.

Dave Rabin:

So if you sign up on our email list and come to our website, you can stay tuned and we'll make sure to update you with all the latest excitement that we find from the way this technology is impacting people and their quality of life in the real world.

Dave Asprey:

Awesome. Thank you. [Apolloneuro.com/dave10](http://Apolloneuro.com/dave10), if you guys want to check it out. If not, I hope you learned a thing or two about sleep and about CIA mind control. It's not as good as we thought it was. I'll see you probably in another few months. We'll do another one of these. I'm always happy to hear the latest in psychedelics, sleep, stress, nervous systems and all the other cool biohacking stuff you're up to. Thanks again.

Dave Rabin:

Thank you, Dave. As always, it was a pleasure.

Dave Asprey:

Oh, great collective. Guys, thank you for being in the studio audience today. Guys listening, if you're interested in being in the live audience where you can actually see me see other people in the live audience, and we actually have a little text thing going back and forth, well, I'd love to have you join [ourupgradecollective.com](http://ourupgradecollective.com), but first you need to get your Apollo. See you guys soon.