

Bulletproof Radio #730

Announcer:

Bulletproof Radio, a state of high performance.

Dave Asprey:

You're listening to Bulletproof Radio with Dave Asprey. Welcome to part two of the interview on Bulletproof Radio with Dave [Rabin 00:00:00:16], we are going to talk about some of the things that you've heard in part one in more detail. And you're going to hear about COVID and epigenetics and the effect of chronic stress on multiple generations of the species and what to do about it. You're going to learn why you should be touching yourself right now and what that actually means. It's not what you think. Dave, welcome back to the second part of our interview.

David Rabin:

Thank you so much for having me, Dave, very grateful to be here.

Dave Asprey:

If you already heard the first part of the interview with Dave Rabin, you're already dialed in. If you're just hearing this now you should go back and listen to the first one first. And the code that you want to know is apolloneuro.com/daveasprey. Because in this episode, we're going to go deep on some of the things that the vibrational technologies or just touching different parts of your body can do. And people have had really positive comments on how they feel when they're using vibrational technologies like the Apollo Neuro in order to stimulate very specific parts of the body so that your stress response turns down apolloneuro.com/daveasprey to save 15%. What is the kind of breath work that is most effective for stress relief for people right now?

David Rabin:

So that's a good question. It's a hard question to answer because I personally truly believe that I don't think there's one form of breathing that works best for everyone.

Dave Asprey:

I think you're right.

David Rabin:

I think it's a very personal thing and that's why meditation is so hard to learn, it's because we're often trying to meditate in a way that someone else tells us to do, rather than seeking it on our own and seeking what meditation means for us. So I think part of breathing is really just doing it intentionally to start, which means focusing as much of our attention as possible on the feeling of breath coming into our nose and our mouth, ideally nose over mouth, but they're both fine to start and just focusing our attention as much as possible on that feeling of air coming in and filling our wind and our lungs and just being present with that feeling more than anything else and allowing that feeling to permeate our entire bodies and then holding a little bit as we finish the inhale and then releasing the breath and then repeating a little bit over and over again, I can tell you that those guidelines are the best that works for most people because it creates some flexibility.

But my fancier question, my favorite breathing technique is one that is... I actually don't know the name of it because speaking of finding, breathing on your own, I found this on my own when I was having a lot of anxiety. And I realized that by breathing and I had a lot of trouble learning how to breathe, deep breathe through my nose and I couldn't control air flow very well. I was a huge novice at it. And so what I realized is I like to whistle. And so I realized that if I pursed my lips, and we also recommend this technique to people with emphysema and COPD to help them breathe more freely. And I realized that if I use the same technique, I recommend it to my patients, which is effectively breathing through pursed lips, like a whistle, but without making a sound or imagine inhaling through a straw then you can control the air flow with your lips in the moment.

And so what I would do is I would inhale through my lips to start and I would try to make the airflow as tight as possible for like a five or 10 second inhale and then hold for two seconds and then release through my mouth with the same pursed lips for 10 seconds, hold for two seconds. And then just keep doing that and trying to make my inhales and my exhales as long as I possibly could. And the longer that they got the more that my mind quieted. So that was the technique that was best for me.

Dave Asprey:

It's very similar to Andrew Weil's technique. And he's been on the show. We actually did an episode at his restaurant. True Foods Kitchen, it was really cool.

David Rabin:

Incredible place.

Dave Asprey:

And especially the pursed lips part is a big part of his technique, which has validity. And with yours, what's really interesting is that your carbon dioxide levels go up when you hold the lungs empty, or when you breathe out really slowly and when your CO2 levels go up, cerebral blood flow and oxygenation go up, which is calming for the brains. It's surprising a lot of people aren't familiar with that correlation between the two. And I learned this many years ago using a cap denominator where you're actually able to measure the CO2 mix and oxygen mix.

And the air that you breathe out it's a little thing that kind of sticks in your nose and samples the air. And it's very fascinating that you have visibility to tweak. And I figured out too, from doing yoga, I had a really strong stress response where I would breathe until my lungs were empty. And then immediately it was like, "Ah, I'm going to die." Actually, if you measure my blood oxygen, I'm not going to die. I have like two, three minutes here. But right away, I was like, "No, you have to breathe right now." And just telling it to calm the F down, like, "Okay, now you're just getting to learn to sit with the lungs empty and it's going to be all right."

It really lowered my overall stress response. If there's some dumb little voice saying, "Take a breath, you're going to die, take a breath. You're going to die." Be like, "Could you just shut up and stop bothering me?" And so the piece that I got for learning how to just like breathe out and like you're saying, I think it was really valuable. And in fact, James Nestor is going to come on soon and talk about that. He just wrote the book breathe. And so your technique of 10 out and then two, okay. [inaudible 00:05:35] you have to live 12 seconds without inhaling. Oh my God. Do you find that, that is part of, what's bringing you a sense of calmness from it. Do you think that's it?

David Rabin:

Yeah. I mean, I think so. I think it's multifactorial, right? So it goes back to the same way that Apollo and touch and music work, which is that as I'm breathing in intentionally, again, the intentional breath being the most critical part, however you decide to breathe. Is it, as you breathe intentionally, it instantly sends a signal to our brains that says, if I have the time right now to pay attention to the feeling of this air coming into my nose and mouth and down into my lungs, I can't possibly be running from a lion in this moment. And for example, if you have time to pay attention to how empty your lungs feel, you know that, that little voice that's been going on in the back of your head can shut up because it's not warranted, right? You're not actually in danger. And that voice is like this vestigial voice that sits there in the back of all of our minds.

Or maybe more in the front, by, neurophysiologically if we were talking about the amygdala. But basically it's sitting there because we have had trauma and we have had negative things happen to us. And we've been in situations where we feel out of control. So part of why breath is such an interesting technique. And similarly why we designed Apollo the way we did and pairing breadth and Apollo works incredibly well together, especially for people who are learning to deep breath for the first time. These things help us to restore a sense of control and agency in the present moment, by bringing us back to our bodies. Our minds can be anywhere. They could be the past. They can be in the present or the future, but if we're not conscious of where they are, then they're generally in the past or the future. So by focusing on that breath, focusing on the feeling of soothing touch, it instantly brings us back into our bodies, which helps us center us firmly in the present, which is literally the place where we have the most control of what's going on in our lives.

Dave Asprey:

That's actually pretty amazing. So that was a side effect of that is just being in the present versus [inaudible 00:07:40] and thought of it for breathing. But of course it makes sense. You've also done some interesting work around ketamine. I've also done a ketamine assisted... I don't know if you could really call it-

David Rabin:

psychotherapy.

Dave Asprey:

Psychotherapy. I did an episode on it. So I experienced it and talked about it probably last year, sometime my belief-

David Rabin:

Dr. Cook?

Dave Asprey:

No, actually this was before Dr. Cook started doing it. This was a guy down in San Diego who's actually been on the show and I'm blanking.

David Rabin:

Oh, is it David?

Dave Asprey:

That sounds like who it was.

David Rabin:

David Feifel?

Dave Asprey:

Yes, thank you. It was David Feifel. So I went down there and said, "I'm just going to experience this." Of course, there's the Burning Man K-hole version of it, which is not really related to what you would do when it's an intramuscular injection. And I would have called it like the forgiveness drug probably. And it's like, Oh yeah, I should let go of that. I should let go of that. So it became very easy. Then again, I trained my forgiveness muscles with neurofeedback, so maybe I'm not normal, but what really came out to me was we've got the amazing work of maps working to bring MDMA onto the legal stage.

And psychedelic mushrooms are also coming out and I've had Rick Doblin on the show to talk about that. And many of the other grandfathers of the psychedelic movement, Terence McKenna and people have come on because I really believe in this. However, ketamine is legal, everywhere, and it's widely available. And it seems to do the same damn thing. So why are we focusing on changing all these laws to get these new things in when we have something that works perfectly well, and we have a ton of traumatized people? So you've actually worked with maps on phase three trials, for MDMA, and you do ketamine related work. Tell me the differences. Like why are we focusing on MDMA versus ketamine?

David Rabin:

That's a really great question. And I think it's because these medicines are very powerful in slightly different ways. Ketamine and the work for ketamine was largely pioneered by Dr. Philip Wilson, who has a psychiatry practice in the Bay area, who I work with, San Francisco Bay area, wonderful human being who would actually, you guys would have great conversations. And he has a wealth of knowledge and has worked with Rick Doblin and [Naps 00:09:59] for a long time, and also helped out with the MDMA protocols for chronic illness, which is very interesting.

Dave Asprey:

Cool.

David Rabin:

He's probably seen more patients with ketamine assisted psychotherapy than anyone else. And so what's interesting about ketamine more than anything is that it was originally developed as a pain medicine to help sedate people who are in acute very serious pain. And then it was moved into ORs and used as a horse tranquilizer to gently anesthetize horses. And then also for children in surgical situations, pregnant women and in some cases, adults. It was found out over the years that people who experienced ketamine in some ways sort of half hazardly, it was observed that it had a very potent antidepressant effect.

The interesting thing about ketamine unlike MDMA is that it's extraordinarily dissociative. So as you were saying, it helped you to train your forgiveness muscles by kind of taking you out of your normal frame. Other psychedelic medicines have this effect, but ketamine does it within like a 60 minute period and it's extraordinarily safe and it can be administered via oral, intra-nasal through the nose, injection or IV. We typically prefer oral or IM through the muscle, but it's a very interesting medicine

because it provides this psychedelic experience, which I think a lot of people even in medicine have trouble describing.

And I think to really get to the bottom of what these medicines have in common is more important than what they have different. I think what they have in common is that psychedelic is the root word and psychedelic does not mean crazy 70s dance party. What it actually means is mind manifesting. So what mind manifesting means is making us aware of what is beneath our typical level of awareness or what Freud and Jung called the subconscious. And then we're being able to draw upon the content or the material that's within our subconscious and then manifested in our conscious waking life.

So, for example, going back to what you said about forgiveness, one of the things that we forget in our day to day lives is the importance of skills, which they are skills like forgiveness, strengthening, forgiveness, and practicing forgiveness, strengthens our neural networks around forgiveness and helps us be better at doing it. Same with gratitude, same with compassion, same with love, believe it or not. And so what these medicines do is they take us out of our normal daily, what we call the default mode of our lives, which is very egocentric and focused on survival and takes us onto a effectively, imagine a mountain where you've just gotten to the top. And instead of having the same tracks that everybody else has taken down the last several days, you would just have eight feet of powder dumped on top of you and can go any direction you want. And so what you start to recognize is,

David Rabin:

Hey, maybe I thought forgiveness was stupid before, but now I realize this is actually a skill that I can practice and get better at it. And the more I practice forgiving myself, and forgiving others, the better I get at it and the better I feel. And the more I'm able to contribute to myself and my community in terms of growth. And so the psychedelic medicine is unique because it allows us, whether it's MDMA or LSD, or psilocybin or ketamine, it allows us to step outside of that default mode and look back at ourselves, and really reappraise what it means to be us, right.

What do we actually want out of our lives, and where do we see ourselves going? So, ketamine is interesting because it provides this benefit on a relatively short order, with just about an hour of treatment. And now it's so safe that we can actually do it remotely.

So in California, as an example, I can mail ketamine to your home and we can do treatments over Zoom, which makes it not only the most legal psychedelic medicine, it's the most accessible psychedelic medicine. Which is an incredible tool for helping treat the trauma that we're all facing at times of COVID, particularly with frontline healthcare providers. And that's a huge focus of Phil's work, and our work together right now.

But MDMA is very useful for other purposes, and in some ways it's more gentle for people who have experienced extreme trauma, or who have a ton of anxiety around that trauma. So it's not that they're all equal. They're not. But all of these medicines work in a paradigm that helps teach us how to heal ourselves more effectively, rather than becoming dependent on a medicine or a therapy that we take one or multiple times a day, every day. You know, that is really where the paradigm is different and really future-focused

Dave Asprey:

As a therapist, if you could only have one of these drugs, which would it be? LSD, psychedelic mushrooms, MDMA or ketamine?

David Rabin:

That's such a hard question. I probably would go with MDMA, to answer your question. But I would say MDMA or ketamine are pretty closely tied. They both have advantages and disadvantages. I think MDMA's disadvantage is the sessions are eight hours long, right? So that is an enormous amount of time.

Dave Asprey:

And you have to have furry jackets to pet otherwise it doesn't [inaudible 00:15:26]

David Rabin:

I mean the treatments are actually delivered in a very similar way. They're both with music, blindfold. It's very focused on in guiding the client or the subject inward, to self-reflect for the majority of the treatment. But eight hours is very taxing for therapists, and the treatment protocol by MAPS actually requires two therapists. So you can imagine. It's very expensive and it's very taxing in general, but very powerful. And people who have had treatment-resistant PTSD for over 17 years, five years out, over 67% of them are no longer meeting diagnostic criteria for PTSD.

Dave Asprey:

Wow.

David Rabin:

So I think when we really look at that number, and we really look at what the results are showing, MDMA and ketamine, and psilocybin mushrooms, because they're both moving so quickly through trials, are the closest thing to a cure we've ever had in mental illness. That is a tremendously hopeful future that we have to look forward to.

Dave Asprey:

It is. And it's interesting, you talk about the amount of time. There's an ROI for every kind of treatment that's spent in your time, and your energy, and your dollars. And I'm thinking about it. We get people in some very similar brain states using neurofeedback at 40 Years of Zen, but we are going for about 10 hours a day, for five days straight, and yes, there are multiple facilitators, and there's multiple neuroscientists and there's stuff glued to your head because there's no way to get to those States fast enough and then do the processing afterwards.

So you batch it up, you're like, "Okay, I'm just going to go in." However, compared to when I did the ketamine therapy, or at least experiment. Okay, you get your injection, you lay there, you do your work. And within 20 minutes after that session, I was on the phone with investors raising a million dollars of funding for my company, and I was not tripping balls, okay. So that is really cool. You almost could do it on lunch, certainly a long lunch, of course with the therapist and all that. So that's a huge gift to be able to just do it. But now have you tried saying, "All right, I'm going to combine the vibrations from an Apollo, with any of these kinds of therapies?" Because it seems like the positive touch, the positive vibrations when you're in an open state would be even better.

David Rabin:

That is exactly where we went. And I think a lot of our original beta testers started combining these things together and actually told us that they had dramatic effects. And that's what really piqued our

interest. We know the power of touch in MDMA sessions is incredible, and grounding and helpful to the subjects, when they're going through difficult experiences.

We know that's similar for other psychedelic medicines as well. So we had a good hunch that this would be very effective. And we've actually had a number of people use this, not only for the preparatory phase of helping reduce some anxiety of the onset of medicine, but also to help them basically restore agency in the middle of the experience when they're feeling out of control. So we talk a lot about the worry of bad trips, and bad trips being a negative experience, or an unpleasant experience that's fearful or traumatizing when you use a psychedelic medicine.

It turns out that if you lean into the experience, and you have an environment around you where you feel safe, we can navigate our way out of basically any bad trip. And Apollo is one of the tools that many people have used to help them do this, and also help with the comedown as well that some people experience from things like MDMA.

So we're actually working with MAPS now to explore how to combine these treatments effectively. And one of the ways is also integration. So integration is this time period after the psychedelic experience, where, when the drug has worn off, it's up to us to take everything we've learned from this mind-manifesting experience, where we pull from our subconscious, into our waking life, and then actually practice what we've learned.

And so Apollo used in the psychedelic experience, and also used after the psychedelic experience, has shown early preliminary findings. That it's very, very helpful with the integration process and helping us really solidify those new pathways, those new patterns of behavior that help us to continue on our trajectory.

Dave Asprey:

I'm thinking that it makes so much sense. I would do that. I haven't really been doing a lot of that kind of work lately, with plant medicines and all. However, I could very much see how it would be additive, not subtractive. It wouldn't take you out of the experience that help you go deeper. We talked earlier, at least you mentioned the biology of belief, which is also the title of Bruce Lipton's book. Bruce has been a big inspiration for me. He's been on the show a couple of times, we've become friends.

And epigenetics is actually the core of biohacking, the changing environment around you and inside of you so your biology will do what you want. That is just a restatement of epigenetics, to be really clear. Epigenetics just isn't a very cool sounding brand, sorry guys. And biohacking goes beyond just epigenetics clearly, with cognitive enhancers and nootropics, and technologies and all. But you do talk in your work about epigenetic regulation of trauma. Talk to me about some of the more esoteric things that people don't know about epigenetics and trauma.

David Rabin:

So I think that epigenetics may be the key to understanding our relationship between our genetic code, our DNA, which is the same in every cell in our body and the environment, and that interface between us and the environment may lie on the epigenetic code. And a number of people talk about this, and have talked about this over the years. And I think this was first postulated, I believe in the early 1900s actually, which is really fascinating because we didn't even know what DNA was back then.

But this has been a theory for a very long time. And I think going to the effects of trauma, there's been an incredible amount of work done by folks like Rachel Yehuda, Mount Sinai, and a number of others who have explored how traumatic events change gene expression patterns over time, not only just in the subject of the trauma, but also in subsequent generations.

And so looking at people who have been Holocaust survivors and their descendants, and then an offspring and grandchildren, and looking at people who've survived terrible famine and their children, grandchildren, et cetera. And what's really interesting is it's been observed for over 100 years, that the children and grandchildren of these people, even though they've been raised in objectively safe experiences, they have an increased risk of things like PTSD, depression, anxiety disorder, metabolic disorder, diabetes to some extent, lots of different things.

We see this in Jewish populations all the time, and we joke around about it, but I think that that trauma is very real. And I think what's interesting is that it's now been shown that there are gene expression changes which occur on the epigenetic level. So for those who don't know, epigenetics means on the DNA. Genetics means in the DNA.

So genetic code in our bodies, the DNA sequence, is the same in basically every cell in our whole body, except our sperm and egg cells. But for some reason, our cells... Our skin cells know to be skin and our brain cells know to be brain, right? And then even subdivided even further. But the reason they do, even though they have all the same code in them, is because there's another layer of code on the DNA that says, "Turn up skin cells in the skin, turn down brain proteins in the skin" and, "In the brain turn up brain proteins, turn down skin proteins." At a very simple, basic level.

And so that also is the same for cortisol genes and cortisol receptor genes, and cannabinoid genes and endocannabinoids, and cannabinoid receptor genes. And so, for example, if we experience trauma, cortisol can be increased in secretion for a certain amount of time, and the receptor can be desensitized, or decrease in secretion or creation of the protein. And then chronic trauma can actually cause the reversal of this, which is interesting. And that was one of the breakthroughs that Dr. Yehuda's group found at Mount Sinai through her research. And so, why is this interesting?

Because these changes get passed on over time, over multiple generations. And it's now been replicated in mice, that it's up to four generations, I should say not up to, at least four generations of safe breeding after the first generation was traumatized, that these genetic changes persist over time.

So when we are experiencing trauma or traumatic... Or symptoms of trauma or anxiety, or restlessness, or negative intrusive thinking like rumination, or you name it. Hunger, eating anxiety, right? All of these different kinds of anxieties that we label in our lives and pathologize with these different names, what we're really talking about is trauma, negative experiences that happened to us that we don't remember, or sometimes you remember, or that happened to ancestors of us that have never actually been resolved and treated. So why is this interesting?

It's interesting because a lot of treatments, like everything from breath work to meditation, to yoga practice. Through psychedelic experiences which create the reversal of trauma symptoms like MDMA is a good example, with just three doses of MDMA, people with 17 years of PTSD, 67% are no longer meeting symptom criteria for PTSD. And this persists for five years or more after treatment ends. That's with three doses of medicine.

So what we're doing is the medicine is teaching people how to heal themselves, and this may actually be shifting their epigenetic code. So that when they have children, they don't pass on the legacy of trauma. So we're actually working with MAPS to do a sub-study of their population that's undergoing MDMA treatment for PTSD now, in collaboration with Modern Spirit and USC, and a couple other... And Yale, and a couple other groups. And then to look at what is actually happening on the epigenetic level before and after people go through these treatments, and can we track those changes.

David Rabin:

Before and after people go through these treatments, and can we track those changes over time to really show in the long-term what is the role of the medicine in changing epigenetic code, and what is the role of the set and setting or the belief that you can heal?

Dave Asprey:

That's a beautiful thing. In the anti-aging work that I've done, I oftentimes say, "Look, one of the easiest things you can do to live a long time is just have a really healthy grandmother." It really does pass down, and the science is very clear. I suspect the real number is probably seven, not four, because that just goes back to the indigenous peoples, seventh generation, in any act you do, you take into account what it will do for seven generations. So you don't throw the plastic in the ocean because it's probably going to be still there in seven generations. So that idea. I'm simplifying there, but there you go.

It's also bringing up some thoughts from the interview with Stephen Porges that I did. Stephen is the father of polyvagal theory and one of the living experts, one of our elders who studied the autonomic response and the vagal nerve in the body. And he mentions that when he does his sound assisted, again, there's some vibration in there, kind of like the Apollo, just that same set... It matters. Interventions on large groups of people, he'll go to a conference, he'll have 25 therapists in the room and he'll play certain sounds that make people release trauma and they have profound effects. And you can do it all over North America, and it generally works, and a few people have unbelievable crying, twitching, just crazy responses you would never even expect from playing certain sounds.

And he took it to London and after three minutes they had to turn off the sounds because the entire room melted down, and in the interview, he says, "Dave, I truly believe that pretty much everyone in London either went through World War II, so they were living in bomb shelters and constant fear of dying and lack of food and all the things that happened, or they're immigrants and people who immigrate are usually immigrating because they were hunted in their homeland or they had no food and things were so horrible they had to give up their people and their land and come to another place to create a new start, which creates trauma." He was like, "So this is a city and probably a country where the trauma levels are so high and it's still sitting in there epigenetically." And that conversation stuck with me just because of what you're saying. So if we could dose everyone with MDMA three times, maybe the next generation will be healthier? Is that true?

David Rabin:

I would say that if we can help people cope with their trauma in whatever way is safe for them to do so, then yes, we will potentially dramatically shift the outcome of the entire human race. I mean, this is really... But focusing on the fact that we all have had trauma. As you said, everyone in that room responded because we all have had some degree of negative experience in our lives where these sounds and these stimuli from the environment resonate with us. So if we ignore those experiences and we sweep them under the rug all the time, over and over again, we're literally doomed to repeat the same thing for ourselves and for our children. And when we embrace those experiences as experiences that challenged us to help us grow and become better, stronger, faster versions of ourselves, which is very much the bio hacking ethos of restoring ourselves to that with which mother nature intended us to be, or even better, then we actually open up and unlock the doors to our full potential. Right now we are literally trapping ourselves in that box of fear.

Dave Asprey:

I'm still processing just how stunned I am over your artful dodging of my attempt to put words in your mouth on that last question. So thank you for your elegant dance. Have you considered a career in politics?

David Rabin:

I have not.

Dave Asprey:

Good. Don't do that. You have more important work to do.

David Rabin:

Medicine teaches us we have to be careful as physicians because MDMA and psychedelics are very powerful, but they're not for everyone.

Dave Asprey:

Exactly. I was hoping you would say that it's not for everyone, and this is not a call to go out and do it, especially when you don't know what you're getting at a party setting. I think it's irresponsible, even though it's fun to do that, because they're not without risk and they're not without spiritual risk, which is very hard to define and measure scientifically. I just trust the people who see weird things that I don't see, because I know enough of them who see the same things that there's some commonalities there. Now, one more question for you, Dave. What do you think the epigenetic impact of the fear of COVID is going to be on our species? I'm talking about the cumulative... We're all worried about it right now, whether we've had it or we haven't, as well as the lack of hugs and the social isolation and all that.

David Rabin:

So I think that it's very similar to what we were just talking about, where we are being taught to fear human interaction to some extent, which is very sad and very unfortunate because it is... Human interaction was something that many of us were already starved of, particularly nonsexual, intimate interactions with other human beings. We are not even taught as children, especially in the US how to have nonsexual, intimate interactions with other human beings.

Dave Asprey:

Wait, you can do that?

David Rabin:

Go to Brazil. Go to Italy. Go to these places where men kiss each other on the cheek or they hug regularly. Men hold hands in these countries. This is not unusual. It's not stigmatized or strange. Men and women will kiss each other, hug each other freely because they know that it feels good and it conveys safety of human interaction between one to another. So when we think about the trauma of separation, it's like the trauma of being separated from our mothers at birth. It's this idea that we are losing touch with ourselves and with each other, because we're losing one of the most incredibly important ways that we boost healing neurotransmitters in our body like oxytocin, like dopamine, like serotonin. All of these things increase in our bodies, and that's just to name a few, when we are experiencing loving, soothing, gentle touch from another human being.

So what is going to be the impact of that? I can say hopefully that if we keep in mind, how important soothing touch is that we will persevere through this and we will do what we need to do to protect ourselves and our loved ones in our communities and hopefully we will get to a point where we no longer have to fear human interaction. But again, looking at the way things are going, this might take some time. And taking time to heal and being patient with that time to heal is important because not everyone is going to be ready to jump back into being close with other people when there's been a threat of illness that could be life-threatening right around the corner for all of us.

But it's important to be aware of this. It's, it's one thing to let it happen unbeknownst to us, but to be aware of what we're missing, and there was a great article about touch specifically published in, I think it was Wired, a couple of months ago, and touch hunger or touch starvation is really important. We need to remember the importance of touch in our lives because touch is the single most powerful way that we convey safety to one another. And it's not unique to us. It's literally hardwired in our nervous system all the way back to the ancient monkeys and many other ancient animals.

Dave Asprey:

There's something evil about the idea that if touch is how you convey safety, and now we are going to associate touch with, "Oh, no, you might die," even though the virus appears to be spread by aerosol droplets, not by touch. So touch could do it, but now we've replaced the feeling of "ah," with the feeling of unknown, "I might die," and I think it's all... I don't think the whole virus is bullshit, the virus is real, but I think that that response, that neurological training of people to fear touch is incredibly evil and it's a bad thing, and I'm all about the hugs.

You look at that first do no harm and relative risk. I think we might be killing more people with that fear training over the next four generations than are going to die from the virus. And maybe I'm out there for that, but you've got to take all of that into account. And I just don't believe that the health professionals who are looking at the virus are taking into account the systemic effect of recommendations on shortening people's lives because they have no food or because they have no touch. And those seem really important in the overall equation. What could we do about that?

David Rabin:

You're right in the way that we really are looking at it in a very siloed approach, which is problematic, and we're not taking into account the mental health aspects of what happens to us when we are touched deprived or when we are deprived from, again, that intimacy with one another of being able to sit face to face and have meaningful conversations where we feel that sense of safety, that someone else is truly caring about us and listening to us and you feel their energy. We can do this over Skype like we're doing right now, but it's not quite the same. And I think that you're right in that we need to take a holistic approach to mental and physical health and emotional health because they're not independent, they're not in a vacuum.

So I don't necessarily have an answer of what we should do, but I think that we all as physicians and care providers, and not just physicians and care providers, but also the leaders of our country, need to sit down and establish what is the most critical factors here that we need to focus on, and how do we make sure that we minimize the damage that could be done as a result of prolonged physical distancing? It's not benign. It's not without potential risk that we distance ourselves from other people, as you said. So making sure that we test frequently, as one example, it's very difficult. Every other country... I shouldn't say every, but many other first world countries are providing frequent testing for people, and you don't have to have symptoms to get tested. But in the US it's extremely difficult to get tested. It's extremely difficult in a lot of places to get protective equipment or to get education about

how to use protective equipment properly. So having adequate protective equipment, having adequate testing resources are just one way that we can make sure that we feel safe around our loved ones and the people who can help us solve some of those mental health problems.

That said, there is also something that we don't teach about that is important called self-touch.

Dave Asprey:

What's that? I'm petting my arm right now.

David Rabin:

Touching ourselves nicely is one way to do it, in terms of the arm pending. But there are pressure points on the wrist, as you mentioned earlier, on the legs, on the ankle, on the chest, if you put your hands on your chest and push inward on your chest, you increase pressure in the chest, which actually increases parasympathetic tone. We also have, I'll take my headphones off for a minute, a little place in the inside of the ear that some people are starting to look at. It's the inside of the outside of the ear. And when you press your finger on that point, it's called a vagal afferent terminal, so the vagus nerve actually comes to the skin right in that spot. And if you massage that part of the ear, you can rapidly induce a sense of calm and relaxation. The chest pressure is another way to do it. There's certain spots of the neck that you can do a gentle massage, shiatsu massage teaches-

Dave Asprey:

Tapping.

David Rabin:

Tapping is a great one. So there's lots of things that we can do to help stave off some of the sequela of the mental illness and emotional issues that come from being touched deprived. That said, I think we really do need to focus on ways that we can bring ourselves closer together at a time where it does feel like we're being driven apart.

Dave Asprey:

Well, thank you for putting those suggestions out there. I've actually run a current using electricity to stimulate the vagal nerve as well in that same point. But all of those things for people, especially who are by themselves largely, it's pretty miserable. We use that sort of a thing in prisons to torture people. Really. We're going to put you in-

David Rabin:

[inaudible 00:00:39:04].

Dave Asprey:

Really? We're going to put you in solitary confinement. If that stress is there, if those techniques are going to help, I'm assuming vibration over those things with the Apollo is likely to also stimulate those same responses.

David Rabin:

Yeah, absolutely. That was a big ... Seeing the lack of therapeutic and soothing touch that my patients had in their lives was a big reason for why we developed Apollo and why we focused on touch. Because

again, evolutionarily, touch is so important for safety and for helping us feel safe and comfortable, and able to turn on our recovery nervous system. Apollo, from our clinical trials, is showing that we can reliably use this tool to help boost the recovery nervous system, which correlates with improved attention control, improved calm, improved heart rate variability, and all of the things that correlate with resilience and recovery, which are very similar to what you get from a loved one touching you. It's not a replacement, but it is something that can help in difficult times, or at least for us, we use it all the time, but particularly at times like this, where we're more touch deprived, it's incredibly helpful tool.

Dave Asprey:

How many times a day, or when do you normally use it? I admit a friend gave me one of theirs, like "Dave, you have to try the Apollo." This is our friend from Thrive, the probiotic company, justthrive.com. Thank you for that, by the way.

Now, I tried it out, but I didn't really follow whatever instructions, and was, "Okay, this thing has efficacy, or at least I can feel it." What's the recipe. Do I do it in the morning, do I do it at night? Do I do it 10 times a day? What's ... Walk me through it.

David Rabin:

Sure. We actually provide a sample schedule that I can share with you now that we've learned from our clinical trials and from our thousands of users in the wild, of what schedules tend to work the best for most people. The app is pretty clearly laid out based on the seven goal states most people will have in their day to day lives. It goes from most energizing at the top left, which is energy and wake up, to then social and open, and then clear and focused, and then rebuild and recover, which is sort of in the middle.

Then down from there is the much more para-sympathetically calm-boosting frequency modes, which are: meditation and mindfulness, which is a calm flow state, and then from there down to relax and unwind, which is really great before bed to help people rapidly wind down when you're stressed out to fall asleep more quickly, and then sleep and renew, which people use in bed to help, as we said earlier, improve time to fall asleep, and improve deep sleep and REM sleep, and decrease resting heart rate.

What we recommend is integrating ... The nice thing about Apollo is it can be used in conjunction with whatever else you're normally doing. It doesn't take time away from whatever else you're doing. Meditation and breath work are fantastic, but when we're learning them, we have to take time out from our normal day to learn and practice the techniques. In it in a situation of life like we're in right now, where most of us are high-performing, working all the time to try to put food on the table and make as much of a contribution to the world as we can in a positive way, we are stressed out. We don't want to take time out to do something else and fit it into the schedule. Part of the idea with Apollo was, can we give you something that you can use as an adjunct or in addition to whatever else you're doing that doesn't take you away? It helps keep you in the moment, keep you in flow.

We recommend that people wear it all day. I wear it all day, and then I basically give myself a 15-30 minute burst of whatever frequency mode I would like for whatever goal I have. Sometimes at night, I'll use an hour for sleep, but I generally don't have many issues falling asleep. It's more for me, I'm one of those ... I used to be an ADHD kid who was never medicated. I had to learn to train my attention, which is always a challenge when I'm doing things that are boring or frustrating. I use it for that in particular. I use it for public speaking. I use it to warm myself up before exercise and then to calm down quickly after exercise.

Really, it's about using it to help augment whatever it is that you're doing in your life, to help you get the most out of yourself. Then it trains you over time. The more you use it, it trains your body to be in a state of peak performance and peak recovery whenever you want to be. Then we get better at doing it on our own.

Dave Asprey:

Have you ever thought of making an anger and distrust mode for when people want to be really good at trolling online? Just kidding.

David Rabin:

Are people not good enough at that, Dave?

Dave Asprey:

That's a fair point. We don't need to amplify that. I always just-

David Rabin:

I actually turn it on when I have to respond to somebody who's trolling online. I will turn that thing on, and that will bring me into a whole other state. Because I'll write up a response that's sometimes a little bit aggressive, and I'll be like, "Wait a minute, wait a minute. This is not going to make this better. Let's pull it back. All right. Take a deep breath. All right, let's go in with compassion here."

Dave Asprey:

There's a lot to be said for the compassion state, if you can dial that out, that's good. I'd still tend to go with the victory state with trolls. I just do this math, and I'm like, "It took you five minutes to say that I'm a bad person, and that I look like poop, and whatever other strange things that you have made up. It's going to take me exactly half a second to ban you so you'll never be disturbed by my work again and to delete your comments so the other people won't be destroyed by your trauma being manifested in words. You should see a therapist about what happened to you in seventh grade." But instead of doing that, I'm like, half a second. Boom, and you're done. Then they just don't bother your people anymore. I feel really good about keeping the community clean, and so I stopped responding to trolls.

But people who have questions, or who disagree, those are the ones where I don't feel triggered by those. It's more just about, "Hey, let's talk about," and then it's just interesting. I imagine you're the same way, but if you're feeling triggered by it, don't waste my time. Boom.

For me that's been really liberating, because they always lose. They spend more time, and if there's no validity there, and frankly, even if some of what ... They have a question buried in 10 layers of insults. Why? Why do I want other people to be exposed to that? Because then they feel bad too. Keep it clean.

David Rabin:

Yep, yep.

Dave Asprey:

Okay. Well, apolloneuro.com/daveasprey is where people can get 15% off. Guys, you listen to the show, you know that I get inundated. People send me buckets of toys, and every book ever printed, I think,

about health ends up in my hands. Very, very few of them make the bar to be worth putting on the show.

If there's something you can do that stacks on top of what you're already doing, that amplifies your performance, or amplifies your ability to do what you're doing so you can do more of the things you want to do in less time. The doing more doesn't mean doing more work, although you could do for that, but what I mean by doing more is you want to do more meditation in less time, you want to do more healing in less time, more relaxation, or more performance, just a trope on stage, whatever. From all of that, I think this totally meets and exceeds the bar. You've got the clinical study. You've got your credentials. You've done your work with psychedelics and all of that. This is just worth your attention in the world of biohacking.

[Apolloneuro.com/daveasprey](https://apolloneuro.com/daveasprey) to save a few bucks on it. I actually don't know how much it is, but I know that we're saving you 15%. How much is it?

David Rabin:

It's 349.

Dave Asprey:

349. About the cost of a one or two hours of therapy, to put it in perspective. I actually do use it. I don't use it every night, full disclosure, but it's usually because I forgot to charge it. I think it's worthy.

Dave, thank you for your work in the world, supporting MAPS is risky from a medical perspective, because there's still people out there who say, "How dare you think about using substances to make the human better? Because only some substances can be thought about." Being willing to challenge that and do the clinical science backed data stuff that says, "Here's who should use what, when." That is an act of heroism, I believe. Thank you for doing that, and just for paying attention to trauma and epigenetics, and all the hard stuff, and then doing something meaningful about it. I appreciate you.

David Rabin:

Well, you're very welcome and I appreciate you too. Thank you so much for having me.

Dave Asprey:

You got it.

You liked today's episode, you know what to do. Head on over to iTunes and leave a review, or YouTube, or whatever else.

If you're so inclined and you're in a position to do it, I highly recommend try this. [Apolloneuro.com/daveasprey](https://apolloneuro.com/daveasprey) and see what happens. What you're going to find is if you're monitoring your nervous system, monitoring your sleep, using any of the tech that I've about on the show, or maybe even some of the stuff I've helped to create, you'll see, there's real validity to this vibration affects the body, the nervous system, the mind. I am really looking forward to hearing what you have to say. Just hit me up on Instagram and tell me what you experienced. I might even put some of your comments in my story.

Thank you.