

Mike: Bulletproof radio. A state of high performance.

Dave: You're going to want to listen through all the way to the end of today's show, because you'll learn a really cool technique to turn on a muscle in your body called the psoas, that is probably tight, at least if you sit most of the time, like a lot of us do. It's something that is completely non-obvious, and it's a really cool hack. So, listen through, learn about that, and learn about some of the new tech that's coming out of Sweden. Pretty interesting stuff today.

You're listening to Bulletproof Radio with Dave Asprey. Today's cool fact of the day is that scientists discovered brain pipes, or drain pipes in our brains. And they scanned healthy people at the NIH and found that your brain actually dumps waste products through the lymphatic system. If you don't know what the lymphatic system is, this is basically the sewage system of your body that doesn't have its own circulatory system. This is why, I'll tell you in the books, and pretty much everyone will tell you like, "Move around some already. Go for a walk." It's because that pumps the lymphatic system, which is really important. That's why I'll do whole-body vibration, just to get the gunk out of the cells, so that it can drain and be excreted.

But, we always thought our brain couldn't do that. In fact, there's a whole system called the glymphatic system that uses cerebral spinal fluid to wash your brain, and in "Headstrong" I write about how to upgrade the performance of that. But it turns out that the guys at NIH actually watch people's brains drain fluid into those vessels. We just never noticed the vessels, because they're running right alongside a major artery, so throughout all of medical history we just oops, didn't notice. So, that's kind of cool, because it completely changes how we think about the brain and the immune system, and how they interrelate, and it brings huge dogmas into question. Things like, oh, there's a blood-brain barrier that does, acts like, "Oh, sorry, there's these big drainpipes in the middle of the barrier that we just didn't really know about."

And what they're looking at now is whether people have AMS or other neuro-inflammatory disorders may have differences in that part of the system. My theory is that, no they don't, because they're getting external toxins that damage their mitochondria, that damage nerve myelination. That's why you should keep your mitochondria strong and don't eat toxic mold for breakfast. It's a bad idea.

Speaking of things that you might want to think about for breakfast- By the way, did you guys see that segway? That was the smoothest segway in all of Bulletproof Radio. So, thank you for your round of applause. I'm just kidding. But that was a segway that I didn't plan.

Before we get into today's show, I wanted to tell you about the fact that we have three roasts of Bulletproof coffee. And there's a three roast Bulletproof coffee variety pack. We've got the Mentalist, which is my current favorite. I'm actually doing it in espresso, and it just drives me crazy, I love it. The Original medium roast, which is my favorite for

pour-over. And French Kick, which is a dark roast that we dialed in with one of the guys who trains the judges in the Cup of Excellence, which is like the world championship of coffee tasting, and I have always said, "Dark coffee, seriously? That ruins coffee." He was like, "No, we can do it." So, something like 60-plus roasts later, we came up with a dark roast that I actually like that doesn't taste like burnt charcoal or something. It's good stuff. You go to [bulletproof.com](http://bulletproof.com) and get the three-pack, save a little money, and well, you get to try them all.

And, there's some other exciting news. "The Bulletproof Diet" is now published in Hungarian. And because I am not one of those people who speaks Hungarian, although that would be an awesome skill to have, I cannot say the title properly in Hungarian yet. So, I'm not going to try. But, I will tell you, yay it's in Hungarian. In my wildest dreams, I never would have expected that "The Bulletproof Diet" would have sold, I think at this point a little bit more than half a million copies, and it's available now in 11 or 12 languages. And when I went to Japan recently where it was published, I couldn't believe it. I went to a book signing, and people were lifting up their shirts to show me their six-packs. And if you've been to Japan, people don't lift up their shirts in Japan, and I was like, "This is the coolest thing I've ever seen." So anyway, Hungarian is added to the list, so if you're in Hungary listening right now, thank you, and you should pick up a copy in your native language, because that's awesome.

Alright, next up. Let's talk about today's guest. This guy is one of the 100 people who attended the first annual Bulletproof Conference about five years ago. So, this was a pretty exclusive group of people who were really early on the bio-hacking scene, and he was a speaker at the Bulletproof Conference in 2014. His name's Mike Hoban. He's a strength and conditioning coach who works with athletes at the professional level, collegiate level, and knows all sorts of weird stuff. And he's going to teach us some things today, and talk about some new tech he's working with. Mike welcome to the show.

Mike: Thank you for having me.

Dave: Now, I forgot to mention, you're coaching, whatever you call it, it's called Elite Speed, this is the name of your thing?

Mike: My company, yeah.

Dave: Yeah. And I've been out to see Mike at his facility in New Jersey. It's really nice, and he's got a strange assortment of bio-hacking technologies. But there's a thing that some of the top people on Earth can do in sports training where they look at you and they're like, have you ever seen Neo in the Matrix? I know it's getting to be an older movie, it's still my favorite movie, but he looks at reality and it's all ones and zeros dropping through? With Mike, he looks at you and you're like all planes and angles, and it's like, "Oh yeah, something's wrong."

So last night we were having dinner, and he goes, "There's something in your shoulder." And again, it's been popping a little bit lately. He goes, "Ah here, I got it," and like

pushes on my palm. And he pushes on like weird things that nothing to do with my shoulder in the way I see the world, because I'm not Neo of the human body. And all of a sudden my shoulder stops popping, and it's fine today. Like, I can run current over it, I can laser it, like there's a lot of stuff I know how to do, but it's one of these crazy things where there's all these networks and movement that are just not visible to us. And Mike is a pro at this stuff, which is why I had him on the show.

So Mike, welcome.

Mike: Thank you. Thank you for having me.

Dave: And thanks for coming up to Vancouver Island to film this live. So, this gave me a chance to play with some of those new toys and just to get a chance to hang out. Plus anytime we get to interview in person, it's probably more fun to watch. On YouTube, go to [bulletproof.com/youtube](http://bulletproof.com/youtube). You can find the YouTube channel where you'll find the show if you're not driving, in which case, well, maybe you should just listen. And if you're at work, and your boss is going to see you watching a video, ah, just keep listening, that's fine.

Mike: Just keep it under the desk if you're going to watch it.

Dave: Yeah, that works. Just put your cell phone down low.

Mike: Exactly.

Dave: You'll be fine. You'll be good to go, and well wait, if you're cell phone's down low, what are you radiating?

Mike: It's not anything good, that's for sure.

Dave: That's right. Keep your cell phone away from your junk, rule number one.

Mike: Yeah. Big time, rule number one.

Dave: So Mike, what got you into all this kind of weird stuff?

Mike: Being a strength coach, one of the things you come across is always injuries, and getting people from point A to point B, from injured to healthy, is always kind of a tricky process.

Dave: Right.

Mike: You have standard rehab. You have obviously doctors, chiropractors, and the issue is, they all look at their own thing. And no one really talks to each other. And that's kind of where the issue comes from. Because normally when we get hurt, it's a multi-level thing. It's the muscle didn't fire properly, so the joint took the load, and now the ligament got stressed, and yada yada yada. And something caused a chain reaction. And

because no one really looked at the muscular system, I decided that was something I had to go further into.

Dave: Now, in that way you actually did some training with Charles [inaudible] years ago, and you've, certainly when we first met you were talking about some of that cool stuff.

Mike: Yeah.

Dave: And Charles has been a real popular guest on the show as well, and he's a friend and apparently a big fan of Unfair Advantage. He sent a note the other day, he's like, "Dave, what's in there? Meth and PCP? I feel so good on this!" I'm like, "Don't mince your words, my friend."

Mike: Yeah.

Dave: So Charles, if you're listening, thanks for that. And just thanks for your training, because training was really helpful for you [inaudible]

Mike: Oh, definitely, definitely. He was the groundwork for all the stuff I do today.

Dave: Okay, beautiful. Now you got into this, and how did you get to be working with pro athletes?

Mike: Basically, just build local kids up until I got to that point. If you get a kid when they're young enough and they're driven enough, and they have the talent to begin with, you can build all those things necessary to get them into that realm to where they can become a pro athlete. I mean, it's just a matter of developing them properly from step one to the last step.

Dave: What's the earliest that you start working with kids?

Mike: I've started with as young as ten.

Dave: Wow.

Mike: And that's mostly just coordination, getting their body to synchronize. We have a lot of kids now who fall into the, excuse the expression, a motor moron category. Because so many of us spend all our time here, we're on computers, we're sitting, and it's not what our bodies are made for. Our bodies are made to move. Which I'm sure everyone's heard [inaudible] but it's a very true thing. That's why everyone keeps saying it. You have to move.

Dave: Especially at that age where you're getting the movement reflexes still wired in.

Mike: Yeah, and especially with all the things we do with kids nowadays, I mean, kids don't crawl anymore. And that's where a lot of our development comes from, it's where we develop our cross-crawl pattern. That's where we develop our cervical curve, from

looking up from looking up at people. And we take that away. We have kids in these rompers and these rollers, so they're walking before they should. We're skipping development.

Dave: Yeah, I actually have a problem with my infant motor reflexes. What happened to me is that, I learned to read at 18 months, which is kind of cool, because it develops your brain a lot,

Mike: It's kind of impressive, yeah.

Dave: But when I really got into looking at what's going on in my nervous system, if I close my eyes and just march in place, I would spin in a circle, with no knowledge I was going that.

Mike: Oh, wow.

Dave: And the developmental ophthalmologist I was working with was like, "Oh, yeah you never learned to crawl, did you?" And like, "Yeah, how did you know?" He was like, "Well, lots of adults have these patterns, your feet don't do this, they don't do that." And it's literally this whole, one hand crosses the body. So, you're seeing this in ten-year-olds now.

Mike: Oh yeah. Yeah, yeah, yeah. We get these kids who they'll try to run same arm, same leg. So, as they lift up their left knee, they'll pump their left arm - which is not the way our nervous system works.

Dave: So it's just, it's a wiring thing. So you're fixing wiring at younger ages. But, you're working with like, the real serious athletic kids usually a bit later than that. So you get teenagers, I know you're doing a lot of work with soccer teams, right?

Mike: Some soccer teams, yeah, and a lot of- Soccer teams, the biggest thing is that we have to do is develop the rear of the body.

Dave: Okay.

Mike: Because those kids tend to develop compensation patterns, because they start soccer at such a young age, they rely on the quadriceps, which are large muscles, but the glutes and the hamstrings are larger, plus there's two muscles versus one. So, you work better and you're more efficient that way. You're going to be faster, you're going to cut better and you're going to decelerate better. Which is what the game of soccer is, it's start and stop. Start and stop.

Dave: Okay. So you do all this kind of work, and then over time, you developed some really specific techniques. And what I wanted to chat with you about today, was that you've got, actually hold on, what's your favorite sport, like to work with? Like what kind of pro athlete is the best athlete to work with?

Mike: I work with a lot of baseball players right now. I mean, I have a kid who's trying out for the NFL, he's a lot of fun to work with. I've trained him since he was 14. He's 22 now.

Dave: Okay.

Mike: So, those are really good sports to work with. Probably those two.

Dave: Got it. So football, baseball.

Mike: Mm-hmm (affirmative).

Dave: And what you found out is that everyone, even people who are not athletes, and there's actually a lot of pro athletes, several pro football teams are religious Bulletproof, I know because they e-mail me and I'm like, "Are you serious? No!" And stuff like that, but I know that you've been working on things that pro athletes and Cross fitters and all may benefit from, but that pretty much everyone has a problem with, because we sit and because of things like that.

Mike: Definitely.

Dave: And you call it like the big three muscle groups that are inactivated.

Mike: Yeah.

Dave: What are the big three?

Mike: So, the three major muscle groups that we look at in every activation are the psoas, the glutes and the hamstrings. So, those are main propulsion muscle groups, and those are the ones that basically make up a lot of our posture.

Dave: Talk about the psoas, because you know the psoas is, but I'm guessing, unless you're into yoga or some sort of study of anatomy, most people don't know what a psoas is, and they can't spell it either.

Mike: Yes, so first of all, it's spelled very funny. It has a p in the beginning, which kind of throws most people off. But the psoas is the deepest muscle in the bottom, it connects your femur, or thighbone all the way to your spine, and it's what causes hip flexion. So, if you ever think that your core is your abs, like I tell people, "Try to take a step just using your abs," because, you can't.

So, that muscle is basically our main propulsive muscle like I said, and it tends to get very short on us, because we spend the bulk of our day seated. Everyone works at a computer, works at a desk, we have our kids sitting at a desk in school all day, and that muscle just shortens. So, we need to open it up, we need to get it working right so, for people to explore their full potential.

Dave: All right, so that's psoas. And then glutes, that the butt muscle obviously, and that's because it opposes the psoas, is that right?

Mike: Yeah, so essentially when the glute gets locked up, you're going to kind of tip backwards, because the muscle shortens, and your psoas is going to be put in a vulnerable position. So, you have to be able to have both of them firing at the right time, otherwise you're not going to move anywhere real efficiently, and you're probably going to have some pain because of it.

Dave: Alright. So, we got your butt and the thigh bone to the spine, the psoas. And what was the other one?

Mike: The hamstring.

Dave: The hamstring, alright.

Mike: Yeah.

Dave: The hamstring is, I guess it's a muscle and it's, well, a tendon right? So, you're talking about the muscle that's around the hamstring?

Mike: Yep. Yeah, the hamstring muscle which runs all the way up and down from the [inaudible] tuberosity down to the nape, which causes both hip flexion, or I'm sorry, hip extension, sorry about that, and knee flexion.

Dave: Okay, so these are the things you see most people because we said we drive, even if we move around some, these are the areas that get weak. And what do you mean by inactivated?

Mike: So basically what happens is, the muscle just gets into a position where it creates more stability, so it stops firing or locks up, and it's not active. It can't reach its full range of motion. It can't reach its proper power potential, because it's protecting something. It's trying to keep something safe, especially in the center of our body.

Dave: Okay, so there's an automatic reflex that we have, it's like, this part of the body's at risk, so lock up.

Mike: Exactly.

Dave: And that definitely works. Like there's distributed network of sensors in the body trying to keep your body alive, we call them mitochondria which feed into the nerves,

Mike: You know anything about those?

Dave: Yeah, I heard about them.

Mike: Okay.

Dave: And they do work to protect those things - and this isn't a conscious behavior, right?

Mike: No, completely unconscious.

Dave: If I was locked up or inactivated in one of those areas, would I even know it?

Mike: Yeah, but you probably wouldn't realize directly what the cause was. A lot of people who have a shortened psoas are going to end up having tight hamstrings, because it's reflexive.

Dave: Okay.

Mike: So, one is short on one side, so the other side shortens to accommodate for it.

Dave: So, you can't bend over and touch your toes, so therefore your psoas needs work.

Mike: Mm-hmm (affirmative), yeah that was actually one of the things I did at the conference when we were calling people up on stage. First we'll test the hip, and if the hip isn't firing properly, we'll test the hamstring length. And nine times out of ten, people who their hips aren't firing, their hamstring flexibility is trash.

Dave: This is an area I definitely discovered I had a problem about five years ago, when I was really getting into this stuff, and my hamstrings, not my hamstring, my psoas was inactivated, even though I do a lot of yoga, I can put my ankles behind my head, I can put my hands flat on the floor and I'm like, and for a 6' 4" guy, kind of usual, but it still wasn't activated, which is odd. So, you did something, maybe at the first conference, I don't know, certainly in the last few years, where like, "Oh here, sorry about this." And like, took your thumb, and by the way, if you're watching, you would see what Mike looks like, but he's a power lifter. Are you like a pro power lifter, almost?

Mike: I competed for a while, but I was never a pro.

Dave: But basically, he had shoulders bigger than like the sheep in my backyard. Like, the man is a wall of muscle. And at least, some muscle.

Mike: Some muscle.

Dave: Just kidding.

Mike: It's all grass-fed. It's all grass-fed.

Dave: But yeah, I put him on the Vasper machine, that the cold cardio thing that we use at Bulletproof Labs, and the Velcro bands almost didn't go around his arms. Like, there was a half inch of Velcro left. So, I've never seen that before, but good God. Anyway, so this not small man takes his thumb and just, you just dig it in like right somewhere around like, to the left of the groin out here, and it's like, I screamed like a child. But then like,



"Oh wow look, I can move again." But it was probably, you just kind of vibrated your thumb a little bit.

Mike: That much.

Dave: It was like maybe a five-second thing, where it was pretty intense.

Mike: Oh yeah. Yeah, no when you reactivate a tissue, it'll,

Dave: What were you doing?

Mike: So, essentially what we did was went in around the lymphatic point, which we were talking about the lymphatic system before, and when lymphatics get clogged up, nine times out of ten, you're going to lose function in that muscle.

Dave: So, there's no sewage, so the sewage gets backed up, and then that affects muscle. But that's not the primary cause of inactivation, it's neurological...

Mike: No, that's not the, it's neurological, it's lymphatic like I said. It's multi-level.

Dave: Okay.

Mike: So it can be anything.

Dave: So, you did that and there's a noticeable change. Same thing you did last night, my shoulder quit popping after you found the right points. And you are going to teach our listeners how to reactivate their psoas today. And then, you've also just like created a program for this. And guys listening, Mike's a good friend, and he's going to talk about, he's got a new program where we're going to teach these people to do this. We have no business relationship, other than that he knows what he's talking about, and he's taught me some cool stuff over the years. And actually, he wrote the exercise manual for the Bulletproof Vibe too, right?

Mike: I believe I did, yeah.

Dave: That was a while back. But, so anyway, we'll talk about his program, but this is not to sell it to you, but just if you like this kind of stuff, you can learn about it. If not, then don't learn about it.

Mike: Exactly.

Dave: So anyhow, you're going to teach how to activate their psoas.

Mike: Yeah, I'm going to give you the real easy one. I'm going to talk everyone through it.

Dave: Okay.

Mike: There's a couple of ways to do everything, but I figure just for the, since we're describing it, it's just going to be easier to go with this one. So, the easiest way I've ever found to activate your psoas is you find your belly button or umbilicus, right? And then basically, you just kind of dig in around that area.

Dave: Like underneath, above, or just straight through?

Mike: Underneath and around.

Dave: Okay.

Mike: We're going to make a circle around the belly button, so to speak.

Dave: Clockwise, counter-clockwise, doesn't matter?

Mike: Doesn't really matter. And you're going to find tender spots.

Dave: And if you're an innie or an outie, does it matter?

Mike: No, does not matter. Very important question.

Dave: No one ever asked that before, right?

Mike: No, no, no, that's a new one.

Dave: You heard it here first.

Mike: Exactly, so.

Dave: So, you're doing a circle, like how deep do you push?

Mike: Well, you want to push probably about four, five pounds of pressure.

Dave: Okay, so pretty hard.

Mike: Enough to make a response. And you're going to look for certain things. Like, you'll feel, we're both sitting here on camera rubbing our bellies right now, it's pretty awesome. You'll feel certain areas where there's like a hotspot. That tends to be like inflamed areas.

Dave: Alright.

Mike: So, if I come in on Dave, start right here.

Dave: Yeah, you'll find some spot, yeah, that's the tender spot on that side on the left.

Mike: And if I move up a little bit, it's not so bad.

Dave: It's less tender, yeah.

Mike: So yeah, we work our way around. There's another one.

Dave: Okay.

Mike: And then we go lower.

Dave: Yeah, it's tender on that side too. Alright. So, you find the tender spots and what do you do? Just-

Mike: Just stay in there a little bit longer and just kind of, it's almost like the same idea as foam-rolling.

Dave: Okay.

Mike: Very different from foam-rolling.

Dave: Yeah, there's no foam roller, for one thing.

Mike: Yeah exactly, that's one thing, and foam rolling won't reactivate a tissue, it'll just kind of break up adhesion, and make [crosstalk]...

Dave: So, this is not adhesion, so if I find the tender spot, what do I do?

Mike: Just stay in there and just kind of go in circles.

Dave: Just kind of circle, like tiny little, the size of a quarter kind of thing.

Mike: Yeah.

Dave: Alright. So, you do that for how long?

Mike: Just about five, ten seconds and then move to the next spot. You're not looking to resolve everything right away, we're just looking to close [inaudible]

Dave: Right, and this is going to turn around your psoas?

Mike: Oh yeah.

Dave: That's not obvious, because your psoas doesn't go through your belly button.

Mike: Exactly.

Dave: Right, and how do you know this works?

Mike: Tried it. Multiple times.

Dave: Oh my God. Evidence. Oh yeah. Evidence based stuff, who knew? Got it. And are there like acupuncture systems that would predict this, or any other school that this borrows from?

Mike: Sometimes it will borrow from Chapman, Chapman reflexes.

Dave: Okay.

Mike: That's one thing. Acupuncture does have its own system of activations, but they tend to be tied to organs, so you can get into some funky stuff that way.

Dave: Okay. So basically you're saying, people who are listening right now, don't do this if you're driving, maybe just keep one hand on the wheel, or if you're in a Tesla, it'll just drive for you, don't even worry about it...

Mike: There you go.

Dave: But, so you find these tender spots and it's weird, if you do a circle you will find some spots are way more tender than others, and you wouldn't feel it unless you pushed. And then you stand it for ten seconds, and how am I going to know my psoas, like if I do a forward fold and then I do this, am I going to do a deeper forward fold?

Mike: What we would normally do is we would test you beforehand, and obviously give you that evidence as well, and make sure you know your muscles are fine. But a lot of people, what you'll realize, an easy test to do on your own is stand up and lift your knee as high as you can,

Dave: Okay.

Mike: And first of all, your balance is probably going to be a bit wobbly. Most people. Especially if the psoas is locked up, because it's kind of pulling on your pelvis and pulling you in the wrong direction. Then when you activate it, your knee is going to go higher, and you're also going to have better balance, because now it's not pulling on your pelvis improperly.

Dave: I have definitely found if you pay attention to your balance, it tells you all sorts of stuff. They have those wobble boards, or even like the digital ones. I bought a Sony PlayStation ten years ago or something, whatever, the Wii, [crosstalk] the Nintendo Wii because it had a board, but I found out when you got it, unless you did all sorts of hacking, you couldn't actually see it. I'm like, "I just wanted to stand on there and see how much I wobbled." I still had to play video games, that were fun. So, if you go to high-end neurology clinics, they're like, they'll actually look at how you walk and whether your weight is balanced, but just,

Mike: Which part of the foot you make contact with.

Dave: Yeah. And like, when you stand, you wouldn't know this, but you actually go in like a cone-shaped circle, right?

Mike: Mm-hmm (affirmative).

Dave: And do you get into that stuff?

Mike: Not in the first level we're going to be teaching.

Dave: Okay.

Mike: We look more at breathing.

Dave: Okay.

Mike: Which is going to be a big contributor to that. And postural analysis as well. Which is a huge predictor for, that might even be more important, in my mind, than balance, because that kind of controls a lot of the balance we have.

Dave: Okay, so just look at the posture. And then, so if you wanted to test this at home, you would stand still, raise your knee as high as you could, and check in, "Okay, am I balanced? Am I tipping over? Do I need a wall?" And do it with both legs?

Mike: Yeah. Both legs to see if one's better than the other. And then go through your activation and see what changes.

Dave: Okay, and the activation is around the belly button, small circle, find the tender spots, and kind of rub them for ten seconds.

Mike: Exactly.

Dave: Alright. So that's one of, and you teach this for the other muscles?

Mike: Oh yeah. We have, we're going to teach at least two or three activations for each muscle group.

Dave: Okay, that's pretty cool. So, there you go, that's a useful thing you can try. Well, I guess if you're driving you can't really test yourself.

Mike: And wait till you're home.

Dave: And would you try a forward fold as well? Or just fold?

Mike: Definitely, you can totally do that. I would probably try one seated, because a forward fold, I mean, we can hip hinge.

Dave: Like a seated forward fold? Okay.

Mike: Yeah. And that changes things. So, I mean a toe touch and a hip hinge are [inaudible]

Dave: Who has a hard time with the forward fold sitting? Is that?

Mike: Yeah, a lot of people with your knees straight.

Dave: Oh, with your knees straight, okay.

Mike: Yeah.

Dave: Got it. I was thinking like, I could probably touch the floor always.

Mike: Oh yeah, no, no, no, right now, no.

Dave: [inaudible]

Mike: Sitting on the floor with your legs extended.

Dave: Oh I got it. Okay, so that's [crosstalk]

Mike: Yeah.

Dave: Oh okay, not I get it. So, actually that's a great test, because that's really challenging for most people. Except soccer goalies.

Mike: Yeah. Yeah. Those bastards.

Dave: I used to play goalie, but that wasn't my move. My move was running into the other players so they wouldn't score. I don't know why that worked for me, but.

Mike: Oh, I did the same thing in football, so [inaudible] used my head as a blunt object.

Dave: Seems to work, until the TBI kicks in.

Mike: Exactly.

Dave: Alright. And then the other ones people ought to pay attention to are the butt and the hamstrings. And if you, okay, another question.

Mike: Sure.

Dave: For activating a muscle like this, how often, I mean, do I need to walk around poking my gut all day long?

Mike: I recommend most people if you have an issue with it. So, a lot of people, I mean, how many people do we know with back pain?

Dave: That's a lot of them, right?

Mike: Yeah. So, if you have back pain or if you have any issues like that, that's another way to test too, by the way, if you're back is hurting and you activate your psoas, and all of a sudden it loosens up?

Dave: Okay.

Mike: Guess what you have? You don't have back pain, you have a tight psoas. That's another tip. Another way you can test. But I tell people, I mean, it never hurts, and it actually helps with some detoxification, because we get the lymph moving again.

Dave: Okay.

Mike: So, two to three times a day.

Dave: Alright.

Mike: I mean, it takes little to no effort. It takes a little bit of a pain tolerance, but the more you do it the easier it gets. So why not?

Dave: Alright, just kind of massage out those little pain points around the [inaudible]. And if you go in and you see like a lot of acupuncturists, like they'll probe the same areas, find out where it's tender, and then based on that, they'll put a needle in somewhere like your knee. Like. "Why are you putting a needle in?" But, as soon as the needle goes in, like, "Oh, it doesn't hurt anymore."

Mike: Exactly, the meridians.

Dave: I'm fascinated by those systems, but I am not a trained acupuncturist. And the people who I know who are good are just constantly studying it. It's an amazing network of stuff there.

Mike: It really is.

Dave: Now, the other thing that you're working on that's kind of cool, is you're always looking at technology for pro athletes that could give them an advantage. And you're one of the few guys who has one of those like, dual, waveform Russian stimulation kind of things, the old [inaudible] it used to be called. So, it was kind of cool when I went to your place in New Jersey, I was really wiped out. I had been on this, that might have been for "The Bulletproof Diet" book tour or something,

Mike: Ah yeah [inaudible]

Dave: But I was, I had been on with the media all day, and I'm, "I'm kind of trashed here," so you used some of the [inaudible] stim that I had at home that I had brought with me. I was like, "Oh, this is like the one place in the entire state where I can find it." And that

stuff really can be regenerative, but aside from the actual stimulation, what are some of the other kind of toys that you play with?

Mike: The biggest thing I'm using right now is something called amino neuro frequency.

Dave: Okay.

Mike: Which is, basically it's really cool. It's these discs that when you apply them to your body, the radiant heat in your body activates them, and they emit a frequency which causes a response in your body.

Dave: When you say they emit a frequency, I'm always a little bit like, "Okay, what exactly is the frequency?"

Mike: The frequencies are, they're harmonious with the ones in your body.

Dave: Okay.

Mike: So like, there's ones to like get inflammation out of your system.

Dave: Is it like heat or light or radiofrequency?

Mike: No, I believe it's just, I would say it's probably more of like a radio frequency. Not a radio, but like a sound wave.

Dave: Okay.

Mike: That's what I'll go with.

Dave: So, there's a lot of people that say, "Oh frequencies."

Mike: Yeah, of course.

Dave: And it's like, okay well, frequencies can be measured, and okay what's the frequency of your ceiling fan? That's very different than what's the frequency of your radio station. And a light has the frequency of the light itself, and then there's a blink, right? So, I'm honestly like, what does frequency really mean, because it just means how often per second. But how often what per second?

Mike: Exactly.

Dave: And what you're talking about there, sounds have frequencies, and you can measure light or sound in hertz, because it's just how often per second. But something called the Piezoelectric effect absolutely happens, and we know that light and heat can trigger Piezoelectricity, right? Where you can get a small electrical signal from sound, and so, like there are materials that respond that way. So, these are discs that use infrared, and then, I suppose it could also be light, I don't know the tech.



Mike: I believe it's infrared.

Dave: Okay. If it was infrared, that would power them probably. And that actually, there's good science behind that. Like infrared light from your mitochondria changes water into exclusions on water. So there is basically, it's the core of really anytime you're doing organic biochemistry, this is happening. So, there's a conceivable angle there. And I'm always, I've had like, probably 50 different people say, "Oh, try this patch." And I'm always kind of like, "If it's a nicotine patch, [inaudible]" some action there. But other times, I find really weird, there's cells in your body that do stuff you have no knowledge of. And by the way, the stuff in your gut, I had no knowledge of that, but it turns things on and off.

Mike: Of course.

Dave: Alright, so I'm open-minded to the idea that you can send a signal into the body that you didn't consciously know about, and even then maybe then it's listening to things that we don't know about. So, in this case, you've done a couple of classes on the stuff, you're using it on pro athletes.

Mike: Using it on everyone, actually. It's all the stuff that we use for our pro athletes, also works for general population as well.

Dave: Yeah.

Mike: And the cool thing that it does for most general population people is it gets them out of pain. Which is a very good thing to do.

Dave: One of the things I like about you, part of the reason you came to the first bio-hacking conference, is you're like, "I like to do what works."

Mike: Basically.

Dave: There's that very pragmatic bio-hacker perspective is that, "Well, we think we know the mechanism of action, but it's more important that we got the result, than that we understood."

Mike: Yeah.

Dave: And so, how'd you find these patches? Like, these are not your invention.

Mike: No, not at all. Not at all. I'm not affiliated with the company in any way. Basically, back in January I ruptured my bicep tendon, which is no fun. Had surgery. My recovery from surgery was becoming very slow, which is very frustrating because one of the things I do is I get people back from surgery. I get people back to their top form or even better, quicker than they would normally get there.

Dave: Right.

Mike: So, everything was moving really slow, I was getting very frustrated. As you can, you know me pretty well, so a frustrated Mike is not a good thing.

Dave: No, you tend to pick up cars and throw them at people.

Mike: Yeah, yeah, and I couldn't do that, because I had a torn bicep right? So, it was really bad.

Dave: Toss Priuses, they're kind of light...

Mike: Priuses and motorcycles. So, I found a gentleman who used this technique. Oddly enough, he and I worked in the same town. And went and got work done, and I mean, I saw a huge increase just in the strength that day.

Dave: Okay.

Mike: So, I mean, my bicep, it was a bicep curl and I was using eight pound dumbbells, which is a bigger pill to swallow. And I notice he's looking at my arm [inaudible], and that day I ended up using fifteens.

Dave: Okay.

Mike: So that was a big jump for one day.

Dave: How do you know it wasn't placebo?

Mike: Because it kept happening.

Dave: Okay, there you go.

Mike: And every time I got treated, it went up a little bit more.

Dave: Okay.

Mike: So, yeah.

Dave: Now, you've become well-trained in how to use these discs, and you actually did some work on my wife, [inaudible] and me last night, and it was noticeable. Like, I have full disclosure. Post Burning Man, I've got this dust in the eye problem, and so I was getting fluid buildup in a manner that looks particularly obnoxious, and you put some patches on this morning and it was gone, which is kind of cool.

Mike: Yeah.

Dave: But you've also tested on a bunch of your athletes. And tell me about the running. One of the reasons I want to talk about it, because you had a bunch of examples. Tell me about the guy with the running speed. What did you do there?

Mike: One of my soccer players, so basically what I did was, I developed a protocol for athletes to run faster. So, I just kind of again, broke him down, looked at him, figured what was going on, figured where his weaknesses were. And we applied some discs to basically facilitate the process. So, I mean I put some stuff on his feet to make him a little more springy, put some discs to increase strength of the glutes and the hamstrings, the muscles I was talking about before. And so we ran that day, we were doing a sprint workout, and all his times dropped a couple hundredths of a second. Which doesn't sound like much, but it's on a ten yard sprint.

Dave: Okay, so short sprints.

Mike: Yeah, very short, so that's a very big margin. Then later that night, he texted me out of the blue, and just said, his words, excuse me, "Holy shit, these discs are magic." And he had told me he ran a 5:45 mile that night. And this is after a full-on sprint workout which is very difficult to do, obviously. And it was like, "Wow, that's great. What was your best time before that?" And he said 6:15.

Dave: So, it really shortened things.

Mike: Yeah.

Dave: Now, did you tell him the discs were going to make him faster, or was there some placebo?

Mike: I told him that the discs we were going to experiment on him. He was a Guinea pig, willingly he was a Guinea pig. And I said, "It should help your short-sprint speed. Your short bursts." And it ended up really affecting his mile. I'm guessing it just really made his stride very efficient, which helped him over the long haul.

Dave: Got it. Sometime I want you to have the pieces of tape or something. [inaudible] this is going to improve you speed, and see what it does.

Mike: We can do that. We can totally do that.

Dave: Yeah. You could tell him afterwards.

Mike: I'll get some dummy discs.

Dave: Yeah, I think you should.

Mike: Yeah. I can totally do that.

Dave: Yeah. Because there is the tape you can put on [inaudible] increase perceptive awareness or things like that.

Mike: Yeah. Sticky tape or something.

Dave: Yeah. I mean, part of me is always, "What's really going on here?" But, I can tell you, putting little discs around my eye probably wouldn't make it drain at night, because I don't, maybe a placebo can do that, but I think that just knowing you and knowing how you work with athletes and just your kind of relentless and little bit ruthless about figuring out stuff that works, and then not caring if people like it or not. Which is why you make people cry when you poke them.

Mike: [inaudible] and my fingers don't bend either, so.

Dave: Right.

Mike: I was kind of made for this stuff.

Dave: Right. And so, I'm intrigued, amino neuro frequency things, I haven't studied all the mechanisms of action. They're out of Sweden. Guy has a dual PhD who does this. I haven't had a chance to talk to him yet. It sounds like he's kind of a little bit reclusive.

Mike: Yeah, from what I understand, yeah. He's very busy right now, he's dealing with a lot of cases in Sweden.

Dave: And he just runs some training courses. You've been through a bunch of his trainings, and used discs with pro athletes.

Mike: I've actually never been through one of his trainings. I've been through people who work at it for him.

Dave: Okay, so he has a group of trainers. Okay, cool.

Mike: Yeah. I haven't actually met him yet.

Dave: Okay. What other tech are you working with that you're excited about?

Mike: So, still using the dual wave stim unit.

Dave: The electrical stim, okay cool.

Mike: Yeah. And the biggest thing we do with that is, it's kind of new hand or old hand, however you want to look at it, we basically just fire things up through the gamma loop.

Dave: What does that mean?

Mike: So basically, all these sensors of the body are connected, all the flexors of the body are connected. So, if we want to fire up, let's say a hamstring, which connect as a hip extensor, a knee flexor, we can hook it up to your triceps. And by stimulating your triceps, your hamstrings and your glutes are going to fire harder.

Dave: Because all of the flexors are wired together to recognize [inaudible]...

Mike: All through the nervous system, yep. So, if you hit one, you hit all of them.

Dave: So if someone's injured, say in their hamstring, you might run the electricity over the tricep, so that it'll get, "Oh, I guess I should strengthen all of these," and then they'll heal faster?

Mike: Mm-hmm (affirmative) You can do it that way, or we can even just apply it directly to the injured area as well.

Dave: That's what I usually do.

Mike: Yeah, but that's no fun, I mean, yeah.

Dave: Well, you like to make people cry.

Mike: Yeah, and that'll like, the first [inaudible] we said with the tricep, that'll help to facilitate training in the latter end after we've knocked down the initial inflammation and kind of help retrain the muscle without directly stimulating it. Because you can overstimulate the area very easily.

Dave: What about like foam rolling and stuff like that? Is that a part of what you do with athletes sometimes?

Mike: I mean yeah, foam rolling is good, it's healthy. I think it's a little bit overdone. I see a lot of coaches now recommending 45-50 minutes of foam rolling.

Dave: Who has time for that?

Mike: I don't, and I work in a gym. I mean, I don't think the average person does.

Dave: What I do, for whatever it's worth, I put the foam roller on the Bulletproof Vibe,

Mike: That's awesome.

Dave: And then I roll, and you don't need 45 minutes of that, because 30 times a second [inaudible]

Mike: Yeah, it's getting in there deeper than any other foam roller, I can definitely see that.

Dave: Yeah, and the Bulletproof Vibe is the, I realize I'm saying this, but some people I think don't know, it's the whole body vibration platform that Bulletproof makes that vibrates 30 times a second, which is the kind of frequency that NASA uses for astronaut recovery. So, I stand on one of those every morning in front of a tanning light in winter, not to get a nice tan, but just to get my Vitamin D and to get the ultraviolet light as a signal into the body. So, I might as well get the benefits of walking and moving and lymphatic drainage and all that.

Mike: And get a tan out of it.

Dave: Yeah, but I'll roll, if I know I have an adhesion, I'll roll with the vibration. And it's pretty intense.

Mike: Oh yeah. That's going to be like a deep tissue massage.

Dave: And there's also, some of the rollers have those like, nobs on them.

Mike: Oh God, the torture devices.

Dave: And I'll put one of those on the Vibe and it's like, "Ahhh!" If I can handle it, I know it's going to break up the adhesion, but I might make some odd sounds when I do that.

Mike: Well, at least you're in the lab, you're out of the house.

Dave: Exactly. Lana's waking up at midnight, "What are the screams coming from the labs?" What about, anything else in there, you're not an acupuncturist, I mean, is there anything that you recommend for people, any other tech that you're using?

Mike: We've actually found using some of the discs on acupuncture points caused an effect.

Dave: Part of me's like, alright, I absolutely know that you can get a signal into the body, and I'm not clear on some of the nuances of how this actually does, like I can theoretically guess. But also, is it possible that there's some sort of marketing mumbo jumbo? If you name something, this is the [inaudible] frequency, like you're going to immediately sell a bunch of these, but this guy doesn't even really, does he sell, like you have to be a certified [inaudible]...

Mike: Yeah, you have to be certified through the company.

Dave: Okay.

Mike: Yeah, you have to work for [crosstalk]...

Dave: So, there's not multi-level marketing?

Mike: Nope. Thank God, I was [inaudible]...

Dave: "Nope, you're out of here!" I know all that crap on the show, for a variety of reasons, but,

Mike: No, there's none of that. There's no, you can't call me up and I'll mail them to you. That doesn't happen.

Dave: Okay, good deal. So basically, you find someone who's through premier sports trainers, massage therapists, who has these things?

Mike: So, a lot of massage therapists were in the course, chiropractors were taking the course.

Dave: Okay.

Mike: Who else was in there? Primal reflex people.

Dave: Okay. So movement coaches.

Mike: Movement coaches, anyone who deals with soft tissue injuries.

Dave: Right. Those are amino neuro frequency?

Mike: Yeah.

Dave: Alright. And again guys, I mention products all the time, like cool tech. I've never even met this company. I learned about these a few days ago. I'm like, "Oh, let's talk about this."

Mike: Yeah.

Dave: I cannot vouch for them, but I can tell you that if Mike says that he's seeing them work with pro athletes and with himself, Mike doesn't mess around so, one of my techniques as a bio-hacker is, I go with the trusted experts who test the stuff out, and I test a lot of stuff myself. So, I'll be playing around with some of these. I'm assuming you're willing to leave me a few.

Mike: Oh yeah, yeah, yeah.

Dave: Yeah.

Mike: I'll throw a few on you before I leave. Make sure they're in the right spot.

Dave: And I played with them last night. So, this is not a full-on, "Oh, these are great!"

Mike: Yeah, not an endorsement by any stretch of the imagination.

Dave: Yeah, but you would say that they work, and so,

Mike: I think they're a game-changer, personally.

Dave: Alright, let's see electrical stim, I think you have [inaudible] vibration with your athletes, okay. What other stuff, are they training with weights? Or mostly sprints, like, tell me more about what's making the most progress in the least amount of time on the pro athletes?

Mike: So, with those guys, I mean, obviously I have the luxury to break down everything, and they can spend more time in the gym if necessary.

Dave: Yeah.

Mike: I have some guys who come in twice a day, just because it's, if they need to lose weight, let's say a guy comes off the season, he's too big. So we can do something, we have the luxury of doing energy systems in the morning, weight training at night. So, it's really driven to what the athlete needs, or what the body needs. So, I do a lot of weight training with people. That's the way I was taught.

Dave: Right.

Mike: And it's what I like doing, it's what I've seen the most bang for the buck for. There's a reason why we still have barbells and dumbbells. They work.

Dave: You people used to use gravity. It's so old-fashioned.

Mike: I think it's the most powerful force in physics.

Dave: And how do you get the strongest, or I say the most useful signal into the body in the least amount of time? That's what I want, that's what we're doing at Bulletproof Labs as well.

Mike: Mm-hmm (affirmative).

Dave: Like is there a way around those limitations? But I think for pro athletes, there's something to be said for working at the speed of gravity.

Mike: And there's something to be said just for getting God-awful strong, and getting strong in the right position.

Dave: And this is of course, a guy who could obviously bench press me, so. And I'm not exactly a small guy, so.

Mike: Maybe squat him.

Dave: There you go. But I did kick your ass in ping-pong.

Mike: Yes, you did. There was not, not even close. I think I lost by 18 points in a game to 12. I don't know how that happened.

Dave: So you could squash me like a grape in your bicep, but when it comes to ping-pong...! Alright, let's see, and you are teaching these muscle activation things.

Mike: Yes.

Dave: You just set up some new courses. And if I remember, it's something about you, peanut butter, something like UPB, I don't remember the full thing.



Mike: Letter U Perform Better Institute. So, if you're interested in finding any information, we're going to start setting up seminars. The e-mail we're going to be using right now is info#upbinstitute.com.

Dave: Alright, good deal, and I'll put that in the short notes for you. This is cutting edge stuff, and Mike, I've known him for, God this is going on six years now,

Mike: Yeah.

Dave: You've done 40 Years of Zen with me, and just a trusted resource. If I was injured, he's one of the guys I would call. And if there's something weird going on, I'd be like, "Hey, you heard about this?" So, I just wanted to introduce you guys to Mike. If you're at the conference, you've already probably seen him, But he's one of those guys who's in the trenches looking at what works and what doesn't work.

Now Mike, I haven't had a chance to ask you the question for Bulletproof Radio, which hopefully you haven't prepared ahead of time for, because then it's no fun. Alright, so someone comes to you tomorrow and says, "Hey, I want to perform better at everything I do in life, not just my sport. What are the three most important things you have to offer me?" What would you say?

Mike: Number one, educate yourself. Find out what you need to do to get to the next level.

Dave: Alright.

Mike: And that's in every aspect of your life, I mean, whether that be work, school, find out where you're lacking.

Dave: Okay.

Mike: So essentially, instead of educating yourself, we'll say be willing to look at your weaknesses.

Dave: Okay.

Mike: So, I feel like that's much more important. Because your weaknesses are always what hold you back. A chain is only as strong as its weakest link.

Dave: And then you say train the weaknesses?

Mike: Yeah, train the weaknesses, I mean, just like any, don't lose your strengths, but bring up your weaknesses. And that's the balancing act, that's very difficult for most people to do.

Dave: Mm-hmm (affirmative), okay that's one.

Mike: That's one. I thought that was three. No, I'm just kidding. So, two more. Another one would probably be don't get too full of yourself.

Dave: Alright, so some ego.

Mike: Because the size of your funeral is going to depend on the weather. I learned that one from Al Vermille. And the third one is basically, good things in, good things out. So, take care of your body. You only get one, and the cost of taking care of this body is a lot less than the cost of fixing the body.

Dave: Good things in, you mean, eat right?

Mike: Eat right, take the right supplements, do the right things for your body.

Dave: Okay, so take care of the hardware. Gotcha. So, the first one's interesting, and normally I'm just like, "Oh, that's cool." And I'm not judging these at all, but it just made me think, so a lot of the first half of my career was all about addressing my weaknesses. And like, I wasn't good at public speaking. I realize like, I'd go into this, I'd have no idea what I said, because I'm kind of terrified, but I'll do it anyway, to the point that, I guess I should become a teacher then. Right? So I taught for five years, and I became the head of global evangelism for billion dollar companies, where I have a sense of joy going onstage, not a sense of fear.

But that was addressing weakness. But I also in the latter half of the time I've been working and all, I've actually become really good at identifying my weaknesses. But instead of trying to become average, which if you put a lot of effort into a weakness, you'll get, "Okay, that's kind of okay." I actually decided to focus only on my strengths and to outsource my weaknesses.

Mike: Nice.

Dave: Which, it's a different perspective on that, but if you don't know where you're weak, like you're hosed.

Mike: Yeah.

Dave: Right? But I just realized project management, I knew I was weak, so I need to become a certified project manager. Like the problem is, doing stuff that you're not very good at, you may go down that, okay you become good at public speaking and then you become proficient and then you become like, "Oh God, I really get joy from this." But more likely, you're like, "Wow, no I'm certified, I know all the steps for project management and when I do it, I don't like my life." Right? So, I learned that about project management. And so, I could be a mediocre project manager. And there are people that are like, "I wake up in the morning, I just love I have a complex project and I have Gant charts, and like oh my God, I'm so excited." And I'm like, "Could you just stick a pencil in my eye?" I cannot make myself care.

So, my take on that was, it was interesting, because I've gone both ways on that. So it made me think about those two sides of the coin.

Mike: One thing I was thinking about someone like myself being a hard-headed Irishman that I am, sometimes the quickest way to where you want to get to is through collaboration.

Dave: Yeah.

Mike: And that's always been the issue for me, so like with this U Perform Better, I'm actually working with my good friend Steve Murato, who's bringing a ton of information to the table that I feel is, he's going to balance me out very well.

Dave: Well, there's certainly something to be said that you're somewhere around guest 450, I think maybe 440-something depending on when we get this out.

Mike: Nice. Nice.

Dave: But yeah, collaborating to learn a few things might be useful, because I've never heard of amino neuro frequencies,

Mike: Exactly.

Dave: And you've taught me some tricks with the electrical stim machine too, that I didn't know. I would just say cultivating relationships with people who know all the stuff you don't know, it's enriching if nothing else, right?

Mike: Well, there's too much to learn it all yourself, so.

Dave: Yeah.

Mike: Awesome.

Dave: Beautiful. Well Mike, thanks for being on the show. You guys are listening to Mike Hoban, who's based in New Jersey and trains pro athletes and some semi-pro athletes, and

Mike: And normal people too.

Dave: And normal people too, and just knows a lot of cool stuff. Way more than I've found in a typical sports trainer which is why you're on the show. So, thanks again, Mike.

Mike: Awesome, thank you again for having me.

Dave: If you like today's show, you know what to do. Head on over to iTunes, and you go to [Bulletproof.com/iTunes](https://bulletproof.com/iTunes), so you don't have to do any thinking about it, and that'll take you right to the page for Bulletproof radio and just leave a review. It takes literally like, five seconds to express some gratitude that way. And if you've been listening for a little

while, you know that gratitude is actually one of the simplest things you can do to change your mind state. So, if you actually said thanks by leaving a review, hey, you're going to get my gratitude because I look at that stuff every day just to see how I'm doing. And if you think that the show isn't what you want it to be, or you didn't get some value out of this, or you're not going to walk around pressing in a circle around your belly button, post on Facebook. Like, tell me what you want. I'm totally all ears.

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