



Transcript of “Mark Alexander: ARX, The Future of Fitness and Exercise – #225”

Bulletproof Radio podcast #225



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Dave Asprey: Hey everyone. It's Dave Asprey with Bulletproof Radio. Today's cool fact of the day is that an Israeli graduate student has designed jewelry that gets embedded in your veins and it uses your blood flow and your movement of your body to generate electricity so you can charge your cell phones or other portable electronics using your own body. Now, I don't know about you but that seems a little bit sketchy because there's this thing called electromagnetic fields and I would be afraid to embed something like that into my body. Who knows. Maybe it will work or maybe it's one more step towards making us all into Borg. Haven't figured that one out yet but whatever it is, I'm intrigued to see what happens next.

Today's podcast is really cool. I've got Mark Alexander with ARX or ARXfit on. Mark is a co-founder of the company and he runs efficientexercise.com. Hey I'm Dave Asprey here at Paleo f(x) where we're recording this live. You might hear some background noise on this episode. It's okay, just drive faster and the road noise will soak that right up. You don't even have to worry about it. Mark Alexander from ARX is here. You guys have heard me talk about Bulletproof exercise and how you really don't need to kick your ass all the time and you go work out everyday, and how some people actually harming themselves by over training. This is something I have in my Biohacking facility on Vancouver Island. It's the ARX technology, ARX. It's insane because you've also heard the Bill McGuff talk about high intensity, low speed exercise eccentric movement. Well this is a machine that's completely computer-driven. There's not even weights involved. It's something that blows me away. When I first met Mark was about three, four years ago at the 21 Convention. He had this kind of stupid-looking machine, it's much cleaner looking now.

Mark Alexander: It's come a long way.

Dave Asprey: It was the first prototype ever right?

Mark Alexander: Yeah.

Dave Asprey: Okay. You put me on this thing and put a belt on me to do a belt squat. I do a little yoga I get to activate some muscles in my legs and I'm like, "You can't beat this thing." It's a winch that could pick up a truck and you're fighting it but it's that fighting, that full muscle engagement, that did something weird. Here's what it did. It showed that I could actually support 1610 foot pounds of force, which would have crushed my spine if it was actual weights. The reason is that we got rid of gravity. If you're picking up a big bar and you wobble a little bit, that 9.8 meters per second squared gravity acceleration means the wobble hurts you. Basically you drop the bar and you twist your joints. When you're fighting against a machine that fights back, but if you let go it doesn't drop, all the sudden you can really apply your full thing. You're hacking the proprioceptor in your joints. It's the coolest thing ever. We're going to talk about this kind of stuff. Hopefully I didn't just steal all of your thunder.

Mark Alexander: No, no. You did a great job intro.

Dave Asprey: We're talking five minutes of exercise every week or two in order to get the hormonal, the bone density effects of exercise. You can do more than that, but it's not necessary. This isn't walking. This isn't replacement for moving around, it's just how to get the hormonal benefits of exercise in the least amount of time. Dude, how did you get into this stuff Mark?

Mark Alexander: Well, I've been around it all my life. Grew up in the Nautilus heydays. They were an influence, Arthur Jones and the high-intensity training principles. But, decided to ... The entrepreneur in me couldn't stay at the University of Texas that long after I graduated. I was with the athletics department and thought, "Well, why not instead of serving athletes, why don't I help everybody?" Help the everyday guy, especially the person that's time crunched. So I started efficient exercise, which is our bricks and mortar training business, and selfishly developed ARX at some point when we realized that there's got to be a better way.

There's a lot of efficient tools out there. You mentioned Doug McGuff and a body by science approach which has some similarities, but we're really maximizing concentric and eccentric loading.

I think the eccentric loading is something that if somebody walks away with, well why is this different? Why is this better? That's definitely one of the areas that it's knocking it out of the park.

Dave Asprey: Cool.

Mark Alexander: Yeah. Now we're in launch mode with ARX and here at Paleo f(x) is one of the jump starts if you will for the technology.

Dave Asprey: What results are you seeing from people using this?

Mark Alexander: Well, we sometimes feel like we're cheating because it's ... people are like, "Oh, you work out a lot?" No, it's like five minutes a week.

Dave Asprey: You're pretty solid. I don't know. I'm mostly electricity. I've used my machine a couple of times but ...

Mark Alexander: Really, when you focus on the large compound exercises you don't have to do a lot of work. Most of our workouts on ARX are under 10 minutes and most people are coming in for that portion of their total well-being for again, about 10 minutes a week.

Dave Asprey: When I did this, I basically did one squat when I did my first time. This is why I-

Mark Alexander: And you crushed some shoes, right?

Dave Asprey: Yeah. This is why I bought the machine. You got to understand, I've always gotten blisters on my feet. It's been a major issue so I'm into really good shoes that just make me feel great. So I have these \$200 Oakley special forces combat boots that are custom engineered and they're really comfortable. I'm wearing these things and I walk out of there and they're trashed. The soles were

completely flattened out. They were no longer cushioning shoes and I was like, "You bastard."

Mark Alexander: They weren't that special.

Dave Asprey: Yeah, exactly. The Oakley marshmallow boots. Just kidding. I'm a fan of Oakley stuff. That was an experience where for the next week, there were muscles in the sides of your shin. I don't even know what that muscle's called. Do you know what it's called?

Mark Alexander: Yeah, well you probably woke up some things that you hadn't quite activated.

Dave Asprey: Yeah. There were some muscles that were sore that I didn't even know I had. That says a lot because I've done a lot of advanced yoga to figure out muscle control that I didn't have. Literally, people said, "Did you get in a car accident?" I'm like, no. I did one squat. I don't normally get sore like that so it was another level for me and that's why I'm like, I want to do this and I'm going to do it probably once every week or two in my lab and bring in other people to show them that because it's there. Also, the quantification rocks over any other exercise I've seen. Tell me how and why your quantifying this and then I'm going to do a demo for people who are not driving and listening to this so you can see how it works.

Mark Alexander: Some of our resistance training has been guesswork at best or traditional strength and conditioning methods. What we're trying to do is make sure that you're doing the right amount. The dose response relationship with anything you have to monitor that. So we're always asking what's the minimum dose required. Much like many of your methods that you promote, we're trying to be efficient with what we're doing. The software works to essentially, and we'll go over there here in a second. It's hard to not look at it. We're mapping out what you've done and your performance. There's bio-feedback to motivate you and then there's the software tracking that over time, you can track your progression and again and again, continue to improve.

Dave Asprey: One of the principles of Biohacking that I've helped to champion is this idea that if you want to talk to the nervous system, you got to talk in under 350 milliseconds. The idea, oh look what I did a second ago, your body's like, yawn, I'm so bored. I'm onto the next leopard that may be jumping on me or something. One of the things that completely is both irritating, which means it's a good thing, and just kind of shocking, is what feedback does. Let's say you've got a big bar in front of you and you're really fighting to do this big barbell curl. You're saying I'm going to push hard, but you don't know if you're really pushing hard.

When you look at this stupid computer screen in front of you, and I say that with love, it has a green bar. This green bar is the top 20% of what you're doing. You're struggling with the winch basically. You're fighting the thing and you go into the top 20%. That's cool. But here's the thing. When you drop out of the 20%, you're going to tell yourself that you're still kicking ass but you're not. You're lying to yourself. It's your proprioceptors acceptors in your elbows and your shoulders lying to you, going ah, we're going to break, we're going to break. Stop. You're lowering your exercise output but you actually don't know you're doing it. When I see that green bar, I'm like ahh. My body was lying to me and it's so motivational. But also it's irritating as all hell because staying in the top 20% of your power curve is, I haven't mastered that. Have you?

Mark Alexander: No, it's very difficult. We're always stronger ... Again, I think we alluded to eccentric loading but barbell bench press is a classic example. When you're lowering the bar, you can resist a lot more on the eccentric phase than you can lift. But yet in a linear and gravity-based system, you have to select a weight that is the same every time. Doesn't account for fatigue, doesn't account for any of your force capabilities or capacities. We're maximizing your capacity in that we are matching, through the adaptive nature of the technology, your force capabilities on the eccentric portion of the repetition.

- Dave Asprey: One of the things I'm looking at for this year is can my mom do it? A lot of the biohacks, some of them are not so accessible. That's not to say all of them but I'm asking myself that question a lot. How can someone who's not, doesn't have a Biohacking lab at home and doesn't do crazy stuff, get benefit from this? What's the oldest person who's tried this?
- Mark Alexander: We've had clients. So again, efficient exercises are our bricks and mortar training business. We've had clients up to I think 93, 94 on it. So really, literally anyone can do it.
- Dave Asprey: Is it different than just going to Nautilus for those people?
- Mark Alexander: Yes. I think it comes down to, for anybody but I think especially after a certain point in time, the maximum, the central nervous system, the ability to fire the fast-twitch fibers is ultra important as well as the bone mineral density. So you're going to lose bone over time. How are you going to ever grow back bone? Well, a couple ways. One is proper eccentric loading, and it has to be enough. There's a tipping point and the Nautilus machine doesn't just get there. Then the re-feed and the refuel of replenishing through collagen protein for example.
- Dave Asprey: There's three things that I know can help people maintain healthy bone density. There's extreme heavy weight during exercise, which you got covered. There's collagen, which you can make your own gelatin or can use [Upgraded Collagen](#). It's good stuff. There's whole body vibration. Right next to this I have the Bulletproof Vibe. What do you think about that stuff?
- Mark Alexander: No, I think that's a winning combination. Why not when you have access to that technology. So yeah, I'm really anxious to see and I think I should take a trip up there at some point to see all the... I think again, you have access to all this technology so why not take advantage of it?
- Dave Asprey: It's how I warm up. I'm going to stand on it. I get all the tissues circulating a little bit and then I'm going to go hit it really hard on

the chest press or something. How do you warm up before you get on a machine like this?

Mark Alexander: We've had warm-up come up several times today here just in our ARX booth and you can actually warm up on the machine by going at a perceived effort, a percentage of maximum effort through repetitions. I guess you'd call that more of a traditional warm up. There are other ways that we do it, through a couple of concentric-only devices that we have. Not necessarily release those at this point but we're working through some of those. There are some ways to warm up and activate the CNS and get the blood flowing. We don't necessarily have a cape that right away you get maximum effort on the very first rep. Although maybe back at 21 Convention you did.

Dave Asprey: I think that might have been what I did wrong there. When we do the demo today, I'm actually going to go light because this whole thing about exercise and recovery. I've been on two full panels today, recorded two podcasts. Tomorrow morning I give a keynote to, I don't know, 1,000 people or something. Then I'm on another panel about willpower. Then after that I hop on a plane, fly to LA and tomorrow I'm going to David Wolfe's Longevity Now conference and I'm giving a keynote there. So if I had to recover from a real one-rep ARXfit, I would need an extra two hours of sleep and I'm doing my slides tonight for my keynote tomorrow. They're done, but they're not pretty. I got to make them pretty.

So don't kick my ass too hard and I say this really seriously for people listening. If you're going to do a heavy workout and you have a huge demanding schedule, that's a bad idea. It doesn't make you a better person. You should save your capacity. I have a lot of ass-kicking to do on-stage this weekend. So my job is to remain resilient and strong and focused, and if I do this to my capacity, I'm going to take a third of my resilience and put it into recovery from this. I don't want that kind of stimulus in my life right now, but I do want to try this because I like it.

Mark Alexander: It should be said that as I'm a co-founder of Paleo f(x) and we've ramped up to this, I probably hit my wall three days ago but I'm still powering through. You're right. I'm not going to do a workout right now because why? That's going to damage your recovery and there's a lot of other things and mental capacity that you got to allocate your resources to, so yeah, we will only go so far in that.

Dave Asprey: Cool. Shall we do this?

Mark Alexander: Yeah. I'll admit my rustiness on actually controlling the machine so I'm going to hand this over to Mike Pullano, who is one of my ARX guys and he's going to-

Dave Asprey: Mike knows what he's doing. He installed mine for me and then he lost my power supply and ...

Mark Alexander: Oh, that's debatable.

Dave Asprey: I might have lost it. It's all working now. What do I do?

Mike Pullano: So first up, you got to buckle up. Safety is no accident.

Dave Asprey: You sound like a stewardess.

Mike Pullano: Make that as tight as you can. This thing's going to pull you up.

Dave Asprey: People listening in your cars, I am putting on a seat belt and I'm strapping it down so I'm really strapped in on a seat.

Mike Pullano: Use your handles.

Dave Asprey: I've got two big rubber, metal, bad-ass industrial looking pull-downs. They're going up on two nylon straps above my head controlled by a winch. Controlled by a mean person.

Mike Pullano: Essentially. So hands are going to be facing you, palms facing your face and bring them in just a little bit closer to your face. Great. From here, I want you to think about staying tucked and staying

tight at the bottom and you are going to resist this machine as it's going away from you.

Dave Asprey: All right. Here we go.

Mike Pullano: Okay, so your idea is to slow the machine down as it's going up.

Dave Asprey: I don't know if this is going to make it past the final cut but I'm just trying to show you guys what I'm doing because it's really interesting. You're going to see me blowing veins or something and then you're going to see this green bar move. I'm not going to go to max capacity because I have a lot of things to do and this will blow out my exercise capacity if I do this. I want to have something left to give to the audience tomorrow. All right. We good to go?

Mike Pullano: So your first rep, give me roughly about 75% and I'm going to pull this up, and resist. Three.

Dave Asprey: Okay.

Mike Pullano: Okay ready?

Dave Asprey: Okay I'm resisting. I'm pulling down right now?

Mike Pullano: Three, two, one. Resist. The idea is to slow this thing down. The core is engaged.

Dave Asprey: Oops, 75% I forgot.

Mike Pullano: Just 75. Now drive your elbows to the ground, pull those handles down faster and faster. Drive this all the way to the bottom. Good. Now we've set your baseline, 352. So I need you to get above 352 on this next rep.

Dave Asprey: 352. This means I could do a pull-up.

Mike Pullano: You could do plenty more than a pull-up with 352. So that's your number that you're going to look at to judge. All right, here we go. Three.

Dave Asprey: What's the highest number you've ever seen there?

Mike Pullano: Closer to 500 or 600.

Dave Asprey: That'd be pretty bad-ass.

Mike Pullano: Yeah, from some pretty strong people.

Dave Asprey: Funny, I'm not like a professional athlete.

Mike Pullano: Here we go. Three, two, one. So real tight. Slow it down Dave. Slow down. Stay on it though. Don't give up. Stay on it.

Dave Asprey: There we go. No, I just had to beat it. I got up to 425. I kick ass.

Mike Pullano: Now drive down. Speed it up.

Dave Asprey: I cheated by the way.

Mike Pullano: Got to clear some sugar on this.

Dave Asprey: This is really hard to do.

Mike Pullano: Okay. Take a little break and we're going to do one more.

Dave Asprey: One more? Are you nuts?

Mike Pullano: One more. I do eight normally.

Dave Asprey: I know but you're manly and I'm a Bio hacker.

Mike Pullano: I think a Bio hacker can handle three. Here we go.

Dave Asprey: I can handle three.

- Mike Pullano: One more. Three, two, one and resist. Abs are tight, core is engaged.
- Dave Asprey: Aw geez. I couldn't go above 334.
- Mike Pullano: I think we're going to have to stop this one short ladies and gentlemen.
- Dave Asprey: The amount of effort that takes, holy crap. I still don't get tired of what that level of output does and I went, this is with the feedback. I went from like 350 to 434.
- Mike Pullano: Yeah. As soon as we were able to dangle a carrot in front of you and you were able to see visually, it works ubiquitously across all people. As soon as I give them a number to shoot for, they almost always get it.
- Dave Asprey: This is why I like it, because you get that level of intensity. I can already feel, my arms hurt in ways they're not normally hurting even if I do really intense electrical stimulation. You can get an amazing pump and a lot of really heavy pushing but it's not like this. So will I be doing this once a week? Yes.
- Mike Pullano: Typically, four exercises all compound movements, very similar to Doug McGuff Body for Science, and each one is roughly around two minutes of time or eight reps.
- Dave Asprey: I'm so stoked to have this available so thanks guys for helping make that possible. I'm a giant fan of this. I think this is the future of exercise. It's remarkable.
- Mike Pullano: Well it better be because I made banners that say that on there.
- Dave Asprey: Did you really? I should be in marketing, I swear. All right. Thank you. I appreciate it. Guys, this is just an example. It's worth watching on YouTube or on iTunes on video. Just understand that there ways you can exercise that are different than what your grandparents did. Kettle bells are awesome. Kettle bell swings are great. This is a different planet and and, theres nothing that says

you shouldn't keep doing body weight exercises but when you want to get maximum benefit, finding a place that has this and once a week coming in for ten minutes and doing it. Once every two weeks even. It might just make sense even if you incorporate that with CrossFit or long-distance cycling or whatever else because I don't believe it's possible to get this level of intensity without the biofeedback. Fighting against a force that is clearly stronger than you is motivational.

When you just look at that screen, the one that you saw, and you see that, all right. I'm not doing what I was before. I feel like I'm at 100% but I'm not hitting the number. When you look at the graph here, you'll see the first time I was doing about 75%. Second time, I peaked and the third time I couldn't, even though I was fighting really hard I couldn't quite do that. Actually, that was when I was like screw this and I let go. Bottom line is, we didn't do a before and after but I'm really feeling it in my biceps. For a 42-year-old guy who sleep five hours and fifty-eight minutes a night for the last 771 nights. I'm not lying, that's on my phone. I feel like I'm doing pretty well with this kind of approach. This kicks ass and it's the most benefit and least amount of time. If you liked this episode, buy the Bulletproof diet. Buy some Bulletproof coffee. Better yet, go to someone who's fat and really tired and give them a cup of Bulletproof coffee and just make their day. That rocks. Have an awesome day. Thanks again ARX. You go to ARXfit.com by the way?

Mike Pullano: ARXfit.com. ARXfit.com

Dave Asprey: Thank you.

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