

Building Strength Isn't About Weight Lifting Anymore – John Jaquish, Ph.D., with Dave Asprey, Part 1 – #862

Dave Asprey:

You're listening to Bulletproof Radio with Dave Asprey. Today's guest has been on the show about three years ago where he launched a product that has since and some of you've probably seen online. He spent years developing and researching ways you can improve muscle, cardiovascular, bone density and he's a really qualified biohacker and walks around looking like that. I saw an article, they called them the Tony Stark of bodybuilding, which was kind of a cool thing. Although I wouldn't call him a body builder.

John Jaquish:

I think it was Tony Stark of the fitness industry.

Dave:

Fitness industry. There you go. Because you're not really a bodybuilder. You kind of look like one.

John Jaquish:

Not at all.

Dave:

But that's not what you do. The fitness industry, there you go. Who was that anyway? Was that Men's Health or something?

John Jaquish:

No. Chicago Tribune.

Dave:

Chicago Tribune. There you go. It was pretty cool. And so his name is John Jaquish, is PhD and he first came on the show because he had this bone density building device. One that I've tested out in the labs down in LA. But most interestingly, he developed a way to put on muscle three times faster than you can do by picking up rocks, which is pretty much all of weightlifting. And he launched it on the show three years ago and since then I've seen dozens of pro athletes talking about it, using it. And it's really done quite well. I wanted to share with our listeners, what are the things that it takes in order to not waste time lifting weights or doing cardio and even to talk about your book because you just read a book about all this kind of stuff. John, welcome back to the show.

John Jaquish:

Thanks for having me, Dave. I'm excited.

Dave:

Let's talk about your mom. What do you think?

John Jaquish:

Yeah, yeah. I got down this path because my mother was diagnosed with osteoporosis and built a series of medical devices to emulate high impact forces. In the emulation of high impact force, we get the benefit of the high impact with the bone mass and without any of the downsides, which would be potential injury. Gymnastics, for example, very powerful bone density. They also retire an average age of 19 because they're so injured. The challenge was how do we get the benefits without the drawbacks? Building impact emulation devices is what I did and filed patents on those and now you can find those in OsteoStrong clinics around nine countries around the world. And there's I think a 180 the clinics now.

Dave:

And there's the bioDensity device as well.

John Jaquish:

That was my first one.

Dave:

Which your research pioneered. That's the one that people have probably seen on videos at Upgrade Labs. And it's interesting because when you talk about mimicking high impact, I used to weigh 300 pounds and I'm still whatever today around 230 with the amount of muscle I'm carrying. High impact for me as a 48 year old who's had three knee surgeries seems stupid.

John Jaquish:

Beyond.

Dave:

Am I right?

John Jaquish:

Oh yeah. Yeah. We're great with impact when we're kids will and coincidentally peak bone mass is at 30 years of age. People grow bone and then they reach 30 and then it starts to diminish. And I have an iPhone app called Fractureproof. And when you look at the way that works, you enter your body weight, you hold it on your hip and you jump up in the air and land and see how many multiples of body weight you can create. If you are beneath 4.2 multiples of body weight, you're doing nothing for bone, nothing.

Dave:

Wow.

John Jaquish:

That's is the minimum dose response. It's challenging people. I meet post-menopausal people all the time who are like, oh yeah, I go for walks every day for my bone health.

Dave:

Nothing.

John Jaquish:

Yep. I give them the grim reality. That's not doing shit.

Dave:

It'll probably help with lymphatic drainage.

John Jaquish:

Of course. Circulation.

Dave:

And some mitochondrial density.

John Jaquish:

It's exercise, it's better than doing nothing but don't think you're going to keep from getting osteoporosis by doing that.

Dave:

What about supplements like K2 and vitamin D3 and taking enough magnesium and possibly calcium if you're deficient, those seem to be pretty important for maintaining muscle mass. I've seen studies.

John Jaquish:

Right. Right. They're building blocks. When I'm speaking in conferences, if somebody asks that question, I give them an example, somebody who lifts weights and takes extra protein or makes sure their protein intake is higher, they can turn that into muscle. Well, if you just ate the protein and didn't work out, would you grow muscle? Everybody seems to know the answer to this question, which is no. Why would you expect to take the building blocks for bone but then do nothing to stimulate the growth of bone and expect to change? You get nothing.

Dave:

Except if you take testosterone and you eat more protein and you don't start lifting, you are going to put on muscle and lose fat.

John Jaquish:

A little bit, sure.

Dave:

Because it was a hormonal thing. I figure with vitamin D you probably can get a tiny change but it's not enough to matter. Why don't you give it a signal from the environment? And you're saying the signal needs to be 4.2 times your body weight, which basically is jumping a couple of feet off the ground because 9.8 meters per second squared is the acceleration of gravity. If you jump up, if you jump high enough and then you land, you could do it. Otherwise you couldn't do it. And it's why 4.2? Is this your original research? Or did you find that somewhere?

John Jaquish:

No. There've been a few studies that showed that. One out of Ylivieska, Finland and another one out of Bristol, United Kingdom, two out of Bristol, United Kingdom. They're all right there at four plus multiples of body weight to stimulate any bone growth at all.

Dave:

Okay. All right, so I'm a relatively young, relatively fit guy. I've had my bone density measured. It's pretty darn strong. I do all sorts of weird stuff, including the X3 and whole body vibration and God knows what else. What are the benefits, if you're not 85 like your mom, to increasing bone density? What do you get out of it?

John Jaquish:

You're avoiding the potential for fragility fracture later in life. The bone you build through the osteogenic loading process, through this heavy loading, whether it's at Bulletproof Labs or it's at an OsteoStrong location, you're getting bone built that's going to last in your body for 30 years. It doesn't go away like muscle, detraining of a muscle starts in 10 days. If you stop working out, you lose your muscle in 10 days. It takes you 30 years to lose the bone.

Dave:

You can put that bone density on and keep it on for long periods of time.

John Jaquish:

That's right. And it can benefit you, huge percentage of your life.

Dave:

Your whole life. There's something else that's going on with this as well. When people have more bone morphogenic protein and higher bone density, they better regulate their blood sugar. You get less diabetes when you have more bone density. Can you walk me through whatever we know about that? Or at least whatever you know about that?

John Jaquish:

Yeah. Yeah. The more bone density you have, the more muscular tissue you have that's active, that's participating in GLUT4 signaling. Pulling in insulin and glucose and using it correctly. We have a clinical trial on bone density and we have clinical trial in type II diabetics showing tremendous outcomes but also the outcomes are stackable. Somebody takes, metformin.

Dave:

It's the diabetes anti-aging drug.

John Jaquish:

Yeah. It's very low side effect, very high benefit, allows a hemoglobin A1C score and then it assists you because it's really doing something curative to the muscular tissue. It's looking at GLUT4, it's increasing the level of GLUT4 signaling. The activity in muscle, not so much hypertrophy but just the efficiency of having it be active and functioning and using its receptors for glucose and insulin, which for somebody who gotten metabolic syndrome, they're not using those things.

Dave:

Yep. It does appear to make a really big difference. Even if your bone density is higher, even if you don't add a bunch of muscle, you just have better bones and ligaments. There seems to be some correlation there.

John Jaquish:

Well, this would be theoretical. There's just no study that's going to look at similar populations, one with low bone density, one with higher bone density because they're not going to be similar.

Dave:

They're not.

John Jaquish:

That's not going to be the only incongruency between the two populations so you can't study it. But what I would say is somebody who has a stronger chassis, has stronger bone mass, are they going to be able to build more muscle? Yeah, absolutely. From an engineering perspective, there's limitations within the body governed by neural inhibition. The more force you put through bone mass, the more likely you are to be triggering at some point the muscles to shut off, sort of like you can't break your own finger by squeezing a fist, no matter how hard you try. You have a neural inhibitory process that is stopping you. But the stronger you get, the more force you can create. I've got some sort of force measurement device in my hand, that force can continue to go up and up and up. And that limitation is still there but it's at a different place every time.

Dave:

It is at a different place. And this again, there's no study about this. We know that there's mitochondria and bone. We know there's mitochondria and even mitochondrial production in bone marrow. There's something going on around higher levels of bone morphogenic protein. Whether there's crosstalk between mitochondria from different types of tissues. What I do know a 100% is people with high bone density have healthy metabolisms, the vast majority of the time and people with low bone density, even if they have strong muscles, don't have as good of a metabolic profile. We're like, okay, even if you're a 22 year old dude, you want to make sure your bone density is where it ought to be. Especially if you're experimenting with some sort of weird plant based diet because you're not going to like where your bone density ends up when you're 30 if you're doing that.

John Jaquish:

20 out of 20 studies show you lose bone density very fast when you go on a vegan diet. Very damaging the bone. Also very high indications you're going to die pretty young. Because a fragility fracture after the age of 50, you have a 50% chance of death within one year based on the complications of that fracture.

Dave:

Does the bone density drop faster than IQ when you go on that diet or no?

John Jaquish:

Yeah. Vegan nutrition also lowers your IQ.

Dave:

We're bad people for saying that.

John Jaquish:

Hey, you're pointing at what holes to dig. I'm just digging them.

Dave:

I was a raw vegan for a while and it actually does affect your cognition, especially your working memory. There are noticeable differences. I'm sorry. I wish I could eat gravel. It doesn't work.

John Jaquish:

Doesn't work. And I also wish plant farming didn't kill seven billion animals a year.

Dave:

I know, right?

John Jaquish:

I say that at a cocktail party and there's some vegan that's upset. I live in California, so they're everywhere. And so I say, "Look, any species that is expanding is taking resources away from another type of species and that's going to equal death." End of story. It does not get more complicated than that. I love the image that you posted the other day. You responded to it when I sent you a comment, the scorched earth looking at the monocrop farming. It's what it does. It just ruins the habitat for anything that would be there. This is killing billions of ground squirrels and rats and mice and birds and birds are being poisoned by the tens of thousands every day.

Dave:

Oh yeah, and bunnies.

John Jaquish:

Over corn farms.

Dave:

And cute turtles and salamanders. You got to name the cute ones because that really triggers the vegans.

John Jaquish:

Yeah. It's true. Nobody cares about the rats. But when you're like, oh yeah, they're killing the birds.

Dave:

And that's not counting bugs, like butterflies and things like that. Now that I'm running a farm with pigs and sheep and now cows and you can see the biodiversity when you have an ecosystem. I'm looking at that. And we're talking about in terms of bone density, I think what's happening in your metabolism, reflects what's happening in the world of your food supply. If you're eating plant based corn and potato and God knows what else based fake meat, it's going to reflect in your bone density, in your cognitive

function and your cell metabolism and you can't break it. Well, so what do you eat? I know some things about what you eat, but tell me about your nutritional thoughts.

John Jaquish:

Great question. Since the last time we hung out, I probably have adjusted a little bit to just more animal protein. Keeping the fats kind of moderate. I'm regularly at a caloric deficit. I'm doing one meal a day consistently now. I'm trying to also experiment with some things that are a little bit easier. A lot of people will just not do multiple day fasting. They just won't do it. I hear a lot, I can't.

Dave:

Just do the fasting challenge. I taught all sorts, 70,000 people have done my fasting challenge. I'll teach it.

John Jaquish:

Anyone who says they can't, my instinct is to be like, well, put that in a sentence. I can't be attractive because you just stay in obese person. You're not attractive, you're well aware of this. I can't keep from dying before 50. Say that to yourself.

Dave:

I'm not saying anything with a can't word.

John Jaquish:

Yeah. Just don't use the word can't. Of course you can. People dry fast and eat one meal a day during Ramadan. More than a billion people a year do this. If they can do it, I promise you, you can do it. I kind of give the tough love to a lot of people who just whine about the fasting. But anyway, I'm sticking to this one meal a day program. I do bacterial fermentation product called Fortigen. That is it's essential amino acids, very high concentration of essential amino acids.

Dave:

Let's explain that for a minute for people. Guys, amino acids are the building blocks of protein and you probably suck at breaking down the proteins you eat into amino acids so you can take free amino acids that are a 100% bioavailable. That's what your Fortigen product is, right?

John Jaquish:

Yeah. Thank you. Yeah, perfect. And so and your body makes a certain amount of amino acids and then the ones that are called essential are the ones your body can't make so you got to take them in. That's really what this amino acid product is. It's made from bacterial fermentation. We are supposed to eat things that are spoiling. That's kind of the natural way we're supposed to be eating but for sanitation reasons, we obviously don't and nor do I recommend that. But Fortigen gets the amino acids from the fermentation without fermentation itself. Then it just has all upside and no down. And so that's a significant portion of my protein. And then I'm just eating one meal a day and at a consistent caloric deficit until I'm going to keep doing this. This is not sustainable, by the way.

Dave:

I was going to say, I'm a little worried about this OMAD for long periods of time. Most people break themselves on a regimen like that.

John Jaquish:

Yeah. Let's say 2,000 calories a day, whereas my basal metabolic rate plus activity is more like 3,000. I'm going to do this until I get to a level of body fat that I feel that I can maintain.

Dave:

What's your goal?

John Jaquish:

I just want to see where, previously many had said their body starts to fight them at a certain level of body fat. I've heard this at 10% body fat but is that really where? I know with the essential amino acids, I have an advantage with X3 as a grossly superior workout that I'm able to build and maintain a lot more muscle than anybody else would be able to who's not using X3. I'm in uncharted territory right now. How lean can I get? How much can I keep it? How easy is it to maintain? That's the current experiment.

Dave:

You're happy to go down to 6% or something? You're looking at fitness competitor kind of levels.

John Jaquish:

If that's where the road takes me, yeah. I'm at a little over 7% right now. I'm at 7.3.

Dave:

It seems like the studies I've seen, when you get under about 10, your all cause mortality starts to go up and there's issues, especially under seven where you get lung adhesions and tearing of lungs. It's pretty gnarly stuff.

John Jaquish:

Yeah. But you got to ask those people studied, they weren't getting a surplus of protein. They were starving.

Dave:

That's a fair point. It's a fair point.

John Jaquish:

They had a lot of other. I got a huge advantage where I get to basically go around the limitations of a lot of protein because I get to have in 16 calories, I can have the equivalent of 200 grams of protein. I know that doesn't even make mathematical sense but because amino acids aren't complete proteins, they don't really count as calories.

Dave:

Well, some of them raise insulin and they sure act like calories. Some of them don't though.

John Jaquish:

They do act like calories. But according to the FDA, you can't call them calories.

Dave:

Yeah, but according to the FDA, glyphosate is safe.

John Jaquish:

This is true.

Dave:

If you say according to the FDA, it has a 90% chance of being financially derived bullshit. I'm tired of you cannot trust them to do anything truth, anything. If they say it's safe, talk about a pain.

John Jaquish:

Hey, I posted this today. Half of their revenue comes from companies they're supposed to be regulating in the form of fees.

Dave:

I've had enough of those guys.

John Jaquish:

Well still, I have to comply with the FDA when putting nutritional information on my product.

Dave:

We all do. But the fact that you can't say there's calories in amino acids that get metabolized in the mitochondria to make electrons, that's because the FDA is lying. Fuck you guys. There.

John Jaquish:

Yeah. Well, this is why I put my Fortigen consumption with my eating window, they're about half an hour apart.

Dave:

Smart. And there are some amino acids you can take probably during a fast that aren't going to raise insulin. If you take a little glycine before bed, I don't think that's going to break a fast but if you take 20 grams of it, it might. But I know the BCAAs, will generally break a fast because of what they do to insulin.

John Jaquish:

Absolutely. Well, BCAAs are not really what your body needs and they don't do anything. There's a couple studies that show that they don't even outperform the placebo.

Dave:

Yeah. The only plus I've seen for BCAAs for endurance athletes. By the way, that's not good for your biology, but for endurance athletes, they tend to get sick more often. And if they take BCAAs, it reduces their likelihood of getting respiratory infections. There's some kind of a benefit there but generally I

think they're way overhyped and all that. Well, let's talk a bit about the X3. I'm going to explain what this thing is and then you can explain it better but you sent me probably the first two prototypes ever in existence.

John Jaquish:

That's right.

Dave:

When you were first launching this.

John Jaquish:

You were the first guy.

Dave:

It launched on the show.

John Jaquish:

You and me. We're the first guys used X3.

Dave:

Actually you sent me three and I gave two of them to people at my company, a woman and a guy who's about 10 years older than me and I had one and this was before they were fully packaged. And I'm like, this thing works. And guys what it is, it's a giant latex rubber band. There's actually three of them and a special bar so it doesn't tweak on your joints. It's very different than a TRX thing. Oh, there you go. Oh, actually that one's all silver. The one I have is still black. I probably saw the prototype you sent me, huh?

John Jaquish:

Oh, you still have the prototype.

Dave:

I think so, I still use the prototype. It's on my bench at home.

John Jaquish:

No. It's made out of anodized aluminum.

Dave:

Look at that sexy thing.

John Jaquish:

iPhone quality.

Dave:

You never sent me a new one? I help you launch your product and John, my feelings are hurt now. Anyway.

John Jaquish:

I didn't know you didn't have a new one but now that you said that, I'll get you a new one.

Dave:

How would you know? But here's the interesting thing. The two people I gave it to in my company, neither one is an athlete or are interested in muscles at all. Both of them at the end of the month or two, can I keep this? They actually liked it. Even though they weren't into this. And what I do now for my muscle stuff is I will do electrical simulation. I'll do X3 and occasionally I'll do some of the devices at Upgrade Labs. We've got a machine called the Cheat Machine but they're all based on a similar principle. But the most portable thing, I actually put my X3 in my luggage on some trips because it's small enough. Sometimes I don't bring the bar, even though the bar is way superior, just because I don't want to carry it but I'll bring the band.

John Jaquish:

Yeah. That'll hurt your joints. You don't want to do that.

Dave:

Yeah, my joints don't like it. But hey.

John Jaquish:

You got to have the bar.

Dave:

The bar checks everything.

John Jaquish:

Just put it in your checked luggage. I used to fly 200,000 miles a year, speaking at bone density and osteoporosis type conferences. And I was all over the world. There were trips where I went from San Francisco to Chicago, to London, to Moscow, to Osaka, Japan back to San Francisco, literally around the world for three weeks. You wake up and you're walking the wall because you have no idea.

Dave:

You and me both, man.

John Jaquish:

Yeah, right. You do it too.

Dave:

All hotels look the same and people are like, how lucky. You get to travel.

John Jaquish:

It sucks.

Dave:

No, I'm in a four star hotel. It doesn't matter. You're there to help people, to teach people and to show something that matters. You're not there to be a tourist. I get it. And so having a portable device.

John Jaquish:

Yeah, but my X3 comes everywhere with me. My current X3 probably has 600,000 miles on it.

Dave:

Okay. Now there are a variety of tubing things you can buy on Amazon and all that and when you first reached out to me, I'm like, is this really substantially different than the common brands out there? And what I found out was, yeah. There's the alignment from the bar but I think you're using different strength of bands. What's the difference?

John Jaquish:

The quality of polymer is the difference. A lot of things have come out since X3 in the last three years to look like X3 so it's just surgical tubing. It's five pounds of resistance. And I do realize there is a market in what I call fake fitness. People will buy a bullshit product, knowing it's a bullshit product or suspecting it's a bullshit product. And their budget's anywhere from 30 to a \$100. And it's so they can say they work out at home and they're not really even planning on using it. It's like somebody overweight and they're lazy and they don't want to do anything. And it's just like, oh, I work at home. I have a Perfect Pushup.

Dave:

I don't think it's that they're lazy, man. You're talking to a guy who was fat and not lazy at all. I worked my ass off and I just couldn't lose the weight. It's not because they're lazy, that's what people easily lose weight think it's because they're doing something that doesn't work.

John Jaquish:

For people who buy the Perfect Pushup, they know they're not going to get a real workout from that.

Dave:

Yeah. That's a fair point.

John Jaquish:

I'm just saying there is a market out there for that type of thing.

Dave:

There is. Doesn't it feel great when people take your great idea and make a crappy knockoff so then other people say it doesn't work. No one's ever done that to me, with the stuff I make.

John Jaquish:

Right. Yeah actually, I frequently say to my employees, "Well, what would Dave do in this situation?" Because of that, just cheap, crummy, knockoff type stuff. And the funny thing, the customers, our customers, some of them accidentally bought the wrong thing because they thought it was X3 and then they're like, "Hey, look at this piece of crap that I bought but then I went and bought an X3 and here are the results I got from the X3." Sort of the truth comes out, I guess.

Dave:

It does come out over time. That's why I'm doing the line of Upgrade Lab supplements totally separate from Bulletproof. I have no idea what's going on at Bulletproof. I'm not involved anymore.

John Jaquish:

Yeah, you sold it.

Dave:

For me to have transparency and visibility, nope, I'm doing my own coffee and all that stuff. And I think that's the right thing to do. Because if I'm not willing to put my name behind it, just like you with the X3 bar. You got to put your name behind it. What happened when you took the X3 to the Miami Heat?

John Jaquish:

They got rid of their weightlifting program and they're a 100% X3. Here's the book, Weightlifting is a Waste of Time. They even endorsed the book, it's right on the back.

Dave:

There you go. That's so solid.

John Jaquish:

Pro teams, everybody think, when's the last time you saw a pro team put their brand on something? Never. They never do that because their brand is so valuable. But the strength coaching team and Bill Foran, he's the strength coach of the team. And he's in the strength coach coaching hall of fame. Guy's an amazing guy. He's done so many great things. The teams he has done programming for are the least injured throughout history. And he's been doing this for a long time. And when he discovered X3, we had a great phone conversation. And I was on a plane the next day.

Dave:

That's so cool. By the way, your book hit the Wall Street Journal bestseller list.

John Jaquish:

That's right.

Dave:

Which is more credible than the New York Times list. The New York Times list is corrupt.

John Jaquish:

Oh the New York Times, dude, it has nothing to do with sales.

Dave:

No, nothing at all.

John Jaquish:

They handpick those books. It's the books they would like to see the most sales in, not the ones that actually had the most sales. And right now I'll just say I was a consultant to someone you know very well and like a lot. He's like, look, you're a straight white male. You're not getting on the New York Times list. They're straight up bigots.

Dave:

Yep. The New York Times is not a trustworthy list anymore. In fact, Dr. Mercola, who's been on the show lots of times and is speaking at the Biohacking Conference September 17th.

John Jaquish:

Nice. Nice.

Dave:

He's sold enough books to dominate the New York Times list but he's blacklisted. If the New York Times can blacklist anyone from their list, it's not a list anymore. I've been on there four times. If they put me on the fifth time, I don't care because the Wall Street Journal is more credible and you hit things with the Wall Street Journal list, which is really cool. And you're right, something that just makes my heart warm, your Weightlifting is a Waste of Time. The whole point around Upgrade Labs is guys, you can recover faster than you're supposed to. You do all sorts of stuff. And if you look at your results, you're kind of ripped. What you're doing works. And you don't pick up heavy things. Except for maybe you pick up your car, which isn't that heavy because it's all carbon fiber or something.

John Jaquish:

This is true. The X3 workout is a hard workout.

Dave:

Oh yeah. It is.

John Jaquish:

I don't want to sugarcoat it and be like, oh yeah, it's so easy. When I go to the grocery store, people ask me if I play in the NFL, they ask for my autograph and I'm like, who do you think I am? Do I look like an NFL player? I don't know. Maybe there is one out there that looks like me. But I think they just think, they see a six foot, 240 pound really lean guy and they're like, huh? That guy, he's not a librarian. He's something else.

Dave:

I'm totally laughing right now because I would be one of those guys who would probably say that. I once, it was in the early days of Bulletproof, I got invited to a celebrity poker tournament and I was supposed to just be an audience. And a friend was like, "Dave, I just put 25 grand in so you can play." It was all for charity. I'm sitting there and I'm sitting next to this guy, just like you described, wall of muscle and I was about to be, hey, obviously you work out, who the heck are you? And then the guy next to him, Larry David is the guy next to him, says, "Tebow what's up?" And I'm like, oh shit, that's Tim Tebow. But I had no idea who he was because I don't recognize any football player except for Nick Foles because he's a buddy. Otherwise I'm clueless. I would hit you up in the grocery store and be like, you must be

famous. That's awesome. And you're getting that because you look, look at the cover of the book. It's kind of ridiculous. How old are you?

John Jaquish:

I'm 44.

Dave:

You're 44.

John Jaquish:

And I put on this muscle after turning 40. I got to point that out because that's very rare.

Dave:

You're more muscular than you were even when we first hung out.

John Jaquish:

Well of course. 40 pounds more.

Dave:

How many times a week or how many minutes a week do you use the X3?

John Jaquish:

The workout's 10 minutes.

Dave:

How often?

John Jaquish:

If you're moving at a clip, you can get it done in 10 minutes. I tend to catch my breath a little bit more so it might be 15. But six days a week. I basically work out an hour a week.

Dave:

Got it. Life is tough.

John Jaquish:

Yeah. Well like I said, it's a hard workout. It's exhaustion beyond level. The way I explained the technology is X3 allows you to train with greater force, which gets you to a greater level of fatigue and then triggers more growth, more growth than you've ever seen. Now here's something Dr. Baker helped me out with, Sean Baker. He's a world record weightlifter and an X3 user. And he really liked the title Weightlifting is a Waste of Time.

Dave:

It's a great title.

John Jaquish:

Yeah. And he says, "And I lift weights. And I read this and it's just I see it." And he goes, "My initial response, I got to know what this guy is saying because I don't think Weightlifting is a Waste of Time." And this is his words, "When I read the book, I realize what you're trying to say. You're saying that there's just a much more strategic approach to reducing the chances of injury and really upregulating your opportunity for growth. Because the point of working out, isn't getting your workout done. You can do a shitty workout that will never yield you progress and you can do that every day and pat yourself on the back. But at some point you're going to get injured. You're going to quit and you're never going to have made any progress. And nobody looking at you will ever know you ever worked out."

John Jaquish:

But he says, "Your programming is for absolute maximum results." And he sees it. He sees it in his own experiences. And really liked that name and approach. Another thing he said was, "You really got to point out to people," and I put this right on the back of the book, "that fitness as a concept is probably the most failed human endeavor."

Dave:

It's true.

John Jaquish:

Humans have screwed up a lot of stuff but nothing more than our health. And we butchered our health and we know that being lean and being strong are the two greatest drivers of long life, yet weak in fat is how you describe the majority of the world's population. And then there's people who work out and we all know, you probably know a 100 people like this. Most people probably know 10 people like this. People who go to the gym couple of days a week and have been doing so for years and they have never seen anything change, nothing. One of the first references, in the book there's 250 studies that are summarized. By the way I get criticized that the book is like an ad for my products. Now I described the rationale.

Dave:

Look man, people criticize.

John Jaquish:

You got that same kind of crap too. Oh, go away.

Dave:

You got to just tell the critics to kiss your ass. People say the same thing for me. Guys, no one knows about collagen, no knows about MCT oil or the benefits of butter so yeah, I'm at a right about all that. And of course I make them because I couldn't buy them and now they're all billion dollar categories. If you want to complain that an author cares enough to write a book and launch products about it, then don't read the books. You're kind of an idiot.

John Jaquish:

Yeah, just go and live in a cave. Go and live in a cave. Lift weights and make no progress.

Dave:

And don't learn new things, because people make stuff.

John Jaquish:

Go be fat and weak and post on Instagram about how loud you can grunt and throw your weights against the ground. Because these are the kind of losers I'm dealing with. You get kind of nutrition trolls. I get gym people. And they're stupid.

Dave:

Look, there's the angry calorie people.

John Jaquish:

Yeah, a lot of calories.

Dave:

There the angry calorie people. They're mostly angry because they're in a calorie deficit. You get the angry vegans, you get the angry ketos, and then you get that angry gym people and all of them have something wrong biologically. And that's what drives their anger.

John Jaquish:

Yeah, the gym people are in chronic pain. If they even go to the gym at all, a lot of them are such chronic pain they quit going to the gym so they've got like string bean arms and a double chin and yet they're going around on the internet acting like they're the world's foremost experts.

Dave:

Great. I want to ask you about these three aspects of strength that a lot of people don't think about and muscle size and strength, everyone thinks about that. That's one of them. The other one is ligaments and tendons, the things as growing at different rates. And the other thing is called wong.

John Jaquish:

They require different stimuli.

Dave:

They do. And then there's wong or interstitial tissue, which no one really thinks about in the west. But if you look at a Shaolin guy, that guy has no muscle but they can stand on one finger and do all this stuff. It's because there's a different kind of interstitial strength.

John Jaquish:

That's right.

Dave:

When you're dealing with X3, talk to me about not just muscles but talk to me about ligaments and tendons and that interstitial strength without bulk. How does all that work?

John Jaquish:

There was a great study from 1996 by Benjamin and Ralphs that talks about fibrocartilage uptake. And they're very careful the way they worded that so that they didn't say you're growing back your cartilage or you're growing tendons and ligaments. You're thickening your tendons and ligaments, which makes them not only more powerful, but the discharge when let's say you trip and fall and you've got to protect yourself, put your arms up in front of you. Discharge over larger surface area means that there's less concentration of force, thereby avoiding a tendonous rupture. To stimulate tendon and ligament growth, it takes very high levels of force axially. Meaning training in the strongest range with very heavy weight. Weights that are far beyond what we could get in a gym. That's exactly how X3 works.

John Jaquish:

You're able to grow your tendons and ligaments and this is why I like so many people who use X3, we have over a 100,000 customers now and they're saying, "This is like the weirdest thing, I've had chronic tendonitis in my elbow and I never even messaged your company about it because I just thought I was just going to have to live with that forever. Thought it was a permanent injury and I've been pain free since the second week of using X3 and I just thought it was a fluke but now six months have gone by and it's just nothing, no pain. And so that's the reason why, because we're actually building the thickness of the tendons and ligaments.

Dave:

Wow.

John Jaquish:

Based on that loading in that higher, more capable range of motion. Remember and we said this on the first podcast and which I urge everybody to listen to, especially listen to both of them because there's a big change in what's happened since then. You're seven times stronger in your impact ready range of motion. When you trip and fall and you go to protect yourself, the back of the hand is in line with the clavicle, right here and there's a 120 degree angle between upper and lower arm. When that happens, you can either absorb in a fall or create the greatest amount of force only in that very specific position. And it is not a linear relationship downward to where you would start the movement. It's a curve and it's a very aggressive curve. And I put that two chapters in the book about those curves and the strength capacity. You kind of go from X, you can hold at the bottom and then in the middle you might be at 2X but at the top you're more like 5X.

Dave:

Got it. That makes a lot of sense and it has to do too with the stretchiness of the band just happens to work out nicely with that.

John Jaquish:

We did have to do some engineering there.

Dave:

I can imagine. I had a thing about maybe four years ago when SARMS were or something I was working to bring into biohacking. I put on 29 pounds of muscle in six weeks without changing my workout or my

nutrition. And I ended up giving myself a shoulder injury because my strength grew dramatically but my ligaments and tendons didn't.

John Jaquish:

They didn't. That's a problem with anabolic steroids too.

Dave:

Yeah, it is. And I did heal it. I used stem cells and all that sort of stuff so my range of motion and pain and all is gone. When people are doing SARMs or anabolic steroids, they're putting on muscle rapidly but they're doing the X3, are they less likely in your experience? There may not be a study but just from what you've seen, are they less likely to experience an injury compared to weightlifting?

John Jaquish:

Speaking from experience and MRIs that people have sent me? The answer is yes.