**How to Build Strength Faster – John Jaquish, Ph.D., with Dave Asprey, Part 2 – #863**

Dave Asprey:

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. You would be less likely to injure based on the loading curve of X3.

Dave:

And when we talk about loading curve, I'm going to expound on that a little bit, and correct me if I need correcting, so guys, if you're picking up a heavy bar loaded with weight and you wobble a little bit, it accelerates at that 9.8 meters per second squared and all the proprioceptors, the little local networks that are trying to protect your joints and the rest of your body, they inhibit you from doing that. But if it wobbles a little bit too much, it actually weighs more and then you get overloaded. But if you're dealing with an elastic band, gravity is not the accelerator, and because of that, you're not getting the same risk of injury because you can't wobble and have it continue to accelerate almost indefinitely like it's in free fall, which is what happens if you drop a bar. Good description?

John:

Good description.

Dave:

All right.

John:

I mean, that wouldn't be good for most of the trolls out there. They wouldn't be able to understand it. You're speaking above their reading level.

Dave:

They're welcome to comment if they want to. It means they're listening. And maybe someday there'll be less trolls when they realize they were bullied in seventh grade and that's why they act like trolls.

John:

Man, you taught me a great lesson, and this was before I got trolled like hard, you were like, "These clowns bring their friends who aren't always as stupid as they are and their friends will buy the product." And I was like, "Really?"

Dave:

It's true.

John:

Yeah. I mean, you got harassed by a whole bunch of clowns and it did nothing but make sales go up.

Dave:

I had a mob of them that were sent over by Rogan when he invested in a competing company, and yeah it was pretty traumatic at the time, but the reality is that it was helping to sell more. And even recently... This is a great thing. You'll want to do this. Some guy I'd never heard of called Fitness Chef in the UK nominated me for like the biggest con artist of the year because I talked about circadian rhythms or something. I'm like, "Who is this guy?" and I looked him up and he's one of those guys-

John:

Does he don't think... He doesn't think circadian rhythms are a thing?

Dave:

No, he doesn't.

John:

You don't even have a product around that.

Dave:

Exactly. And he also thinks that diet soda does the same thing. He's one of those people, "It's okay to eat Oreos all day, as long..." Anyway-

John:

Yeah. There's a couple of idiots that are out there like espousing that aspartame is great, and you're like, "People are fatter and sicker than ever, especially those who consume more aspartame."

Dave:

It's dumb. Here's the hack for you, though.

John:

[crosstalk 00:03:04] research shit, dude? What?

Dave:

With trolls like that, you actually put them on your page and you use their handle as a discount code on the X3 bar. That's what I did. So, Fitness Chef drove tens of thousands of dollars of sales of my circadian product using his account name. Right. So, thank you, Fitness Chef. I love you, brother. Could you say more about me?

John:

Yeah. It's funny. There was a guy recently who actually I kind of like, and I'm not going to mention the names just because I don't want to help him out. I mean, the guys was a real jerk. But I kind of liked the fact that he raises at least awareness of some science.

Dave:

Sure.

John:

Yeah. I mean, this guy is just like... He trolled me based on promotion of fasting, and it's like... He's all about calories in, calories out, and that's the only thing that matters. Hormones don't exist to this guy.

Dave:

There's still people like that.

John:

And it's just like, "Okay dude, first of all, I'm not one or the other." So, I eat one meal a day, that's an intermittent fast, and then my meal is a caloric deficit, but I'm getting a protein surplus. So, we know you can gain muscle and lose body fat at the same time. Now, testosterone crashes within 30 days of doing that, but I do have a prescription for testosterone replacement therapy, maybe one of the only advantages of that. It's funny, I don't care how many times I mention that I have testosterone replacement therapy, I get accused of it all the time and it's just like, "Clown, did you do not-

Dave:

People do the same to me. I'm like it's an anti-aging thing.

John:

Like, dude, shit, I posted about it yesterday. I'm not trying to hide it.

Dave:

It's in all my books. I'm like, "Guy, just stop it. If you want to find a problem, you can find one, but it might be you. And that's okay."

John:

Oh, yeah. Oh, frequently. Yeah, go look in the mirror in the bathroom. That's where your problem is.

Dave:

Exactly.

John:

Yeah. Yeah. And so, I can avoid that based on the TRT. Oh, here's another funny thing, and I think you got this, I think you were the one who stimulated me to do this, somebody who said like you had been on TRT and that's why you had such an advantage. And it was like-

Dave:

Of course, unfair advantage. I'm also on thyroid. It's like I'm going to live a long time or something. Who would have thought?

John:

Whatever. Yeah. Also, you get a decent night's sleep and you work on your sleep, so is that an unfair advantage to everybody else? Should the police come over and bang on your window in the middle of the night just to make it fair?

Dave:

That's right.

John:

Right. Right. Yeah. I lost my place here. I don't know what the hell I was saying. Yeah. Oh yeah. If you look up testosterone replacement therapy as defined by Web MD, which is better than the FDA... a little bit.

Dave:

I don't know. Anyone who Google will rate on a health thing is not a reliable source, So I don't use Google anymore for health searches. But I think Web MD rates too highly on Google so it's probably not accurate. Sorry, guys.

John:

Yeah. But they defined testosterone replacement as a natural level of testosterone. Like full stop. Okay.

Dave:

That's what it means. What are your average numbers when you're on replacement?

John:

What are the advantages? There are advantages. If you miss a night's sleep, does your testosterone crash? No, but it normally would. Or if you drink a bunch of alcohol, does your testosterone crash? No, but it normally would. So, those are a couple of advantages. But the one I'm-

Dave:

Just living longer, seems like a good deal to me.

John:

Say that again. Say it again.

Dave:

Plus, living longer seems like a good deal to me.

John:

Oh, right.

Dave:

There's always that.

John:

There's that.

Dave:

And I published the studies about that in my anti-aging book, but people just get mad about it. But what are your levels? Where are you normally targeting when you do TRT?

John:

My endocrinologist wants me around 1,000 a little over 1,000.

Dave:

Okay.

John:

Yeah. Nanograms per [crosstalk 00:07:08].

Dave:

I target between 800 and 1,000 for me, and that seems to work really well. If I go above that, I don't know that I get a lot of advantages-

John:

No, you get side effects.

Dave:

... but it doesn't feel quite right. Yeah.

John:

And it's like you start getting symptoms that you're converting some to estrogen, which should not happen. If you have those symptoms, you're taking too much.

Dave:

Yep.

John:

Yeah.

Dave:

I'm with you there.

John:

I've won over a lot of endocrinologists, including my own, because I'm like, "Look like you're not supposed to be..." Aromatase inhibitors, they're not candy. You shouldn't give them away like that. Because they have a much bigger downside than the testosterone does, and for those that don't know what an aromatase inhibitor... Basically, it slows your estrogen down or shuts your estrogen production down while you have the high androgenic in your body. Well, the testosterone is converting to estrogen

for a reason. It's because you have too much and you're not using it, so cut back. You got to work with your doctor on this if you get a prescription for testosterone. It's not there so that you can have a supernatural dosage. In fact, that would be illegal and your doctor will be thrown in jail if that was the objective. And that's never the objective. The objective is to get you at the most healthy level, which means you don't have side effects. Right. I was originally prescribed 200 milligrams, and now I take like 140.

Dave:

A week?

John:

A week.

Dave:

Once a week or twice a week? Are you-

John:

Once a week.

Dave:

[inaudible 00:08:39] it?

John:

And I'm at 1,000 nanograms.

Dave:

I do 70. Wow. I do 70 once a week, maybe 75.

John:

Okay.

Dave:

And that seems to be enough. But there's a lot of evidence that says if I cut it in half and did it twice a week, more frequent dosing to be healthier. It's just a pain in the ass to, literally, to stick a needle into your ass.

John:

Yeah. You could also do subcutaneous shots. Those aren't-

Dave:

Yeah. Those aren't so bad. There is some evidence... Sub-Q is more effective on a per mil basis, but it probably aromatases more easily than going into muscle. I did a lot of research on that, and I switched from sub-Q going to IM and I'm getting better results on IM. But I mean, I've played around a lot and it may be individual variability.

John:

Yeah.

Dave:

So, you talked about something else in your book that's cool about an anabolic rebound after fasting. Tell me what you've written about there.

John:

Yes. Yes. Okay. You've never met Henry, my coauthor.

Dave:

No.

John:

One of the smartest guys I've ever met. He's just awesome. So, I called him one day and I'm describing something. I'm like, "Every time I get done with a fast, whether it's a 24 hour fast or a 72 hour fast, whatever, I feel like I have... It's I went through puberty again for like a day and I just put on a pound of muscle. Like all of a sudden I look a little different. I was already leaner, but all of a sudden it's like muscle came on, but none of the body fat or even hydration even came back. I feel like I'm gaining muscle like at an abnormally high level."

And so, I said, "Here's what I want you to do." I said, "The problem with the fasting studies is the fasting is generally looking for weight loss, fat loss. It's checking hydration, but it's also, they're looking at body composition. So, if somebody gains muscle in an abnormal way, it'll be recorded but it probably won't be in the abstract. So, what I want you to do is read the discussion section in..." I think we were referencing 20 different fasting studies at the time. This is why we were writing the book. "Read the discussion section and look for any abnormal gain in muscle mass. Because the researchers weren't looking for it so it will not be the thrust of the study. The thrust is study will only be about whether this is a good weight loss method or not."

And so, Henry says to me, he's like, "The chances of me finding that are next to zero. That's a really specific request." And I said, "Just humor me. Just give me..." It was in the morning, I'm like, "Just give me the rest of the day. Give me seven hours. Just do this for seven hours." And he's like, "All right." Calls me an hour later and he's like, "Was this a trick? Did you read these already?" And I said, "No, no." I was actually in the middle of meetings. I was at meetings all day long. I was traveling. And I said, "No, but tell me what you found." He goes, "I found exactly what you were describing." And there's one specific study that just they said, "We can't explain why the fasting group gained 2.2 kilos of muscle," that's over five pounds of muscle, "in 24 weeks, and they did not work out at all." Neither did the control group. Of course, the control group lost a little bit of muscle because they were on caloric deficit, which is to be expected. And the fastening group gained five pounds of muscle doing nothing.

Dave:

It seems like fasting might be good for you. I don't know. I mean, it's been a part of the Bulletproof diet since 2011, the intermittent fasting.

John:

It's like one of the first things you wrote about. Even when all you had was the Bulletproof executive website-

Dave:

Yeah.

John:

Yeah. You were talking about it back then.

Dave:

Because it was one of those things where I was seeing those results, where I was feeling better, my muscle composition... I had abs for the first time even though I'd done Atkins and I'd tried paleo and all that stuff and I wasn't getting the results. It's just like don't have breakfast already. It's not that hard. I love it that fasting has enough studies now that... It's very hard to argue with the fact that fasting has metabolic effects. People say it doesn't. They're lost in clown land where I have a belief if I'm wrong I'm a bad person, mommy won't love me. And they will never see new ideas because new ideas would make them bad people in their sick little world.

John:

Yeah. There's a whole crowd of nutrition scientists out there that almost have like an Orthodox way of looking at things that actually is not scientific. They dismiss anything that isn't caloric restriction because caloric restriction has more studies. Well, caloric restriction was studied for longer.

Dave:

I've been studying psychology a lot lately trying to understand the behavior of certain executives that I've hired in some of my portfolio, and I realize... in fact, I've seen the studies now. What narcissists do, any time they're wrong, it means they're bad people and it means no one will love them. Therefore, they can never be wrong and they will walk off a cliff. And when you get a narcissist who was either bullied or abused by their parents and they become a research scientist in nutrition, they will find an idea, they'll glom onto it, and they would rather die than evolve their thinking because no one will love them if they evolve their thinking. It is a brutal psychology trap, and if you let those people into your company, they can destroy it. And if you let them into academia, they're bad people. We need to all send them to therapy or prison.

John:

They just have a confirmation bias going into absolutely everything they do. And it's just beyond me. And also, I don't see either or. It's like caloric restriction is fine, intermittent fasting is better. But like-

Dave:

You could do both if you want, or you could try [crosstalk 00:15:00].

John:

Yeah, I'm doing both.

Dave:

Yeah. Yeah. It's okay.

John:

It's just mind blowing how absolutely unscientific they're willing to be when it comes to something that they made a stand against. I don't want to get political, but I just remember when George W. Bush just wouldn't admit that he was wrong about weapons of mass destruction, and it was just like I think the world would have forgiven the guy if he just said, "Our data said it was there, and it wasn't."

Dave:

Yep.

John:

That's all he needed to say. He was a wildly unpopular president in his second term because he just wouldn't say it.

Dave:

The recipe for government is very tightly tied to that never be wrong, do whatever it takes to stay in power, lying's okay. That's not a partisan thing. What's the rule of government? Don't lose power. And it doesn't matter what you do, because if you lose power, you're not a good government.

John:

And you're not government anymore.

Dave:

Exactly.

John:

Right.

Dave:

In academia, you're not government, so we can teach you to be kind as a scientist and to be humble and to be curious. And when you see those ones, those are the ones who changed the world because [inaudible 00:16:13], "Oh my God, I always thought this, and now I saw new evidence," so I evolved my learning versus I defended my pedestal. And I'm just so tired of that. And you're seeing it, like these things crumble because of social media. So, we all talk about stuff that works, and then you get all these crusty, old academics who are saying, "That can't be, therefore it isn't." And same thing, X3, case in point, "You can't put muscle on faster than you could put muscle on," and you say, "But I just did." These are the same people said, "You can't put butter in your coffee because you'll die," and you're like, "Well, that's funny, people lost a million pounds and they actually improved their blood markers. That's so weird." Right? And so, I'm with you there.

You talked about some other radical stuff, though, that we haven't touched on. So, taking carbs and Viagra together to trigger a muscle cell splitting. Okay, what's up with this? Are you telling me I can take Viagra to grow muscles other than the one it's supposed to grow?

John:

Yep.

Dave:

All right. Tell me how that works and what I could do that wasn't pharmaceutical.

John:

So, what I was looking at was how do we induce hyperplasia? So, hyperplasia is the splitting of muscle cells. It's very rare. Professor Jose Antonio at Florida State University has done the most work. In fact, his... This is like the protein guy. He's one of the world's experts on protein consumption and building muscle and just what you generally need for health. Brilliant guy. But he did his doctoral work on hyperplasia, and what he would do is take birds and put them into an extreme stretched position, so pull their wings way back, and-

Dave:

Sounds kind of mean.

John:

Animal studies. I mean, hey, it'd be better if we did it to people, but I don't think people would agree to 24 hours of being in a stretched position.

Dave:

As long as you eat the birds when you're done, it's probably better than what they do to industrial chickens, so there's that.

John:

Probably. Yeah, there's that. He showed, he demonstrated in his research that these birds could grow... They could increase their muscle mass in the pectoral muscles by 140% with the stretching. Well, stretching doesn't do it for humans, and birds are obviously very different bio-mechanically, biochemically. Like yoga people don't put on muscle, so we know that that's not a thing.

Dave:

Is that true? Because, man, I did yoga, I was freaking ripped.

John:

Really?

Dave:

I mean, I couldn't believe it. But you do crow pose. I mean, that's a weight-bearing exercise. Handstands and all that.

John:

Sure, sure. Yeah. There's aspects of that, but it's not like bodybuilders are like, "Oh, forget weights. I do yoga."

Dave:

Oh yeah, because you will not be a bodybuilder, but you can get pretty muscular from yoga if you're doing a muscular practice.

John:

Well, there's something there and that's where I'm going. So, the idea is you stretch the facia of the muscle, the casing around the muscle, and that's one of the limitations when it comes to stimulating the muscle in either having growth of the cell or splitting of the cell. If there's extra room in there, the cell can split. So, what you do is you take a vasodilator, which would be like Viagra or a Tadalafil.

Dave:

Niacin? Would niacin work?

John:

You can take niacin. You can take niacin. You can take Epimedium. I mean, I think Epimedium... I don't know every form I've ever stumbled upon, it was just like the worst smelling, worst tasting thing ever. I mean, niacin would work. Yeah. Just as long as you get vasodilation, and then you need... you want to super hydrate the muscle, so what I do is I take like 40 grams of glucose, glucose tablets, which you can find in any drug store, usually in the diabetes treatment section. And so, I'll do that. So, an hour before the workout, I take the vasodilator, 15 minutes before the workout, 40 grams of glucose, workout, and then stretch afterwards. So, blood's rushing into the muscle. So, I've hyper hydrated the muscle. Now when I stretch, the facia is put at such an extreme that it is stretching with the objective of triggering hyperplasia.

Dave:

Oh, that's actually really cool. Wouldn't a little bit of creatine help as well?

John:

It could, but you know how much red meat I eat, so I'm probably at my maximum level of creatine.

Dave:

So, you're not deficient.

John:

Yeah.

Dave:

But if you took like a micronized creatine at the beginning of that, glucose is of course going to be really good. There's nothing stopping you form putting glucose in your pre-workout, or hell, you can put it in your Bulletproof coffee if you want to. I mean, if you want to have a really great day... You don't want to do it all the time because it's bad for you, but if it's a high-performance day, 20, 30 grams of glucose, plus the MCTs, holy crap. Right? But the coffee and all isn't going to do anything for your protocol here. So, Epimedium is horny goat weed. How much of that would you recommend? I mean, I've taken that stuff on and off.

John:

I don't remember-

Dave:

You don't remember the dose. Okay.

John:

Yeah. Because I just go right to the pharmaceutical.

Dave:

Is it a normal dose or is it like a lot?

John:

No, it's normal dosage.

Dave:

Okay. Got it. So, you take a couple capsules of that stuff.

John:

It's whatever it says on the bottle. Yeah, yeah, yeah.

Dave:

Okay. So, a couple of capsules of horny goat, some glucose. Could you use Honey?doesn't spike quite as high, but you probably could use it if you want it to.

John:

Sure. Honey's fine.

Dave:

All right. sizable-

John:

I'm not a big fan of fructose.

Dave:

Me either. Yeah.

John:

Yeah. Well, the studies are not a fan of fructose either. There's a study that's pretty new called F is for Fat, F is for Fructose. Did you read it?

Dave:

I haven't read it, but I came across it.

John:

I'd say it's pretty new. It's this year. Oh yeah, it showed like 25% more fat storage when they took two groups of people that they primarily gave fructose two versus glucose. The fructose crowd put on a lot of body fat and the glucose crowd... And it wasn't a high amount in either case, but it really seems a lot like the fructose went right to fat storage.

Dave:

Oh, it totally does. It raises triglycerides. And guys, if you're listening and you're like, "Fructose, glucose..." Sucrose, the sugar that you normally eat, white sugar, brown sugar, all that kinds of... coconut sugar, it's basically half glucose and half fructose. And if you're eating high fructose corn syrup and honey and agave and all that, it's got way too much fructose it. So, there's the ratio. And there's an argument, it's in the Bulletproof diet even, that you toss out the fructose, you minimize that. If you're going to have the carbs, you have the glucose. You're still going to get advanced glycation. It's not good to spike your sugar all the time, but if you were to do it once or twice a week in conjunction with stretching after a workout and it totally fixed your fascia, all right, I'm totally thinking that the risk/reward and the pros and cons, the pros are ahead there. And you're saying you don't bother with horny goat weed, you just go straight for Viagra? That's your favorite?

John:

I use tadalafil. Tadalafil

Dave:

Tadalafil, all right. Got it. Okay. It has other side effects. I wonder, is there any peptide you could use there, like PT141 doesn't cause vasodilation, but it sure has other Viagra-like effects. Anything like that?

John:

Thus far, like SARMs and peptides, I have not recommended or tried only because a lot of them don't have enough research behind them so I'm just super cautious.

Dave:

BPC has enough research. That stuff is awesome.

John:

It probably does. Yeah. I just haven't.

Dave:

Okay. Got it.

John:

I could.

Dave:

And guys, BPC157, which is a gastric healing peptide that will heal a lot of injuries that people get, so you can take it orally or you can take it in injection-wise. It's got a ton of evidence.

John:

Has that ever been trialed for stomach ulcers?

Dave:

Oh, tons. Even IBS and Crohn's, they get better. I mean, you need to kill whatever's causing the ulcer if you have H pylori or whatever, but-

John:

I'm asking because I had H pylori.

Dave:

Oh, yeah. So, you got to kill the H pylori. Even grapefruit seed extract, there's natural ways, silver, or you could take antibiotics, but then it just heals really fast. And it's meant to be active orally and so it's probably the best studied and safest of all the peptides, other than maybe GFK, which is something that you find in collagen any way. So, that's a copper tripeptide.

John:

Yeah. One thing I wanted... this is a discovery I made a while writing the book, and I couldn't wait to talk to you about it. The premise of the book is like the standard approach to fitness isn't working. Most people who work out all the time don't see any results, nothing. One of the first studies that I cite shows 23%, a quarter of the people, cannot trigger muscle protein synthesis at all no matter what they do.

Dave:

What the heck? How's that even possible?

John:

And that was the question. Now, this particular study that I'm talking about, it just noticed that a lot of people who weren't already filtered out as strength athletes, because a lot of strength studies just use strength athletes. And a lot of them just use beginners, a quarter of them don't have any response at all, so it screws with the study. So, they're sort of preconditioned to be muscle gainers already before a lot of these studies happen. So, when this particular study took a chunk of the general population and looked at it, they weren't triggering any growth at all, so the question is why? I always get a little bothered when somebody says, "Everybody's different. Find out what's right for you." No, that's sort of like the cop out. That's for the people who want to eat Twinkies all day and they're like, "I do better with high carbs." No, you don't. You just want to eat that way.

Dave:

I don't know. There was about 10% of the population who genuinely does better on high starch, but not high sugar.

John:

Okay. Yeah.

Dave:

Right?

John:

Right.

Dave:

That's a real thing.

John:

I'll take that.

Dave:

Okay.

John:

So, what I ended up looking at was what really are the genetics differences between people? That's where the book concluded, that's at the end of the book. So, I look at hormonal differences. The hormonal differences, deficiencies aside, aren't that big of a deal. Most people who are 20 years old, they're kind of all the same. I mean-

Dave:

That's true.

John:

Yeah. Pretty much all the same. So, same level of testosterone, same level... Races are a little different. Black people have higher testosterone, then White people, then Hispanic people, then Asian people. But also, not drastic differences. But here was the stark difference, and it was that the tendon layout where the muscles connect a bone is usually the same. However, there are outliers, and those outliers can become very powerful people. So, like if you look at my arm, if my-

Dave:

You have ridiculous arms. Yeah.

John:

Thanks, dude. So, if you look at my arm, and I'll describe it for the people who are just listening to this, you have your pectoral and it inserts on the sternum, and then somewhere on the humorous bone, usually right at the start of the humerus bone towards the top. But some people have a mutation, so they have an attachment at the other end of the humerus bone. Now, they've got incredible leverage on their pectoral muscle. Therefore, they're able to engage the weaker range of motion to a greater degree than you. These are the people who become NFL players. These are the people who seem gifted. These are the people who...

I knew a guy in high school, he looked like a professional bodybuilder at like 17 years old, and he looked like he was on every drug you could imagine. But no, I mean, the guy was just mowing lawn that's for the summer and went through puberty, and all of a sudden he was gigantic. And he was our

best football player in high school. We all shrugged our shoulders and... And I was friends with him. It was just like, I guess it's genetic. Well, the genetic difference was I watched this guy bench press, he seemed to bench press with no sticking point, just getting it off the chest and this is the sticking point. Whereas, other people... This guy was... He had a little more trouble in here, but then when he got to the top, he got to the top.

So, we have a certain group of people, maybe 1% of the population that has this tendon mutation, and so they're the ones that can become outrageously strong. Now, there's still a limit to the strength they can gain, but when you have a high degree of variable resistance in your training, their advantage is gone.

Dave:

Oh really?

John:

Yes. And that is why X3 works so well. That is like the main thrust of why I want everybody to read Weightlifting is a Waste of Time. Once you understand this... And I also, I love the NFL. I think seven... No, 19 NFL players I'm working with right now, and you can see them all on the website. Terrell Owens is one of them. He's still in NFL condition, and he loves X3. He came to us. We have an unpaid endorsement from [inaudible 00:30:13] NFL Hall of Famer, one of the greatest receivers that has ever lived. And so, what would he can do..

Now, he does have this mutation, but it's still an advantage for him because he's offloading the weaker range of motion and hyper loading the stronger range of motion. And that's really the difference between these athletes that can access more of the muscle in the weaker range of motion. So, in essence, anything he does is almost like variable resistance, but not to the same degree. And now that X3 is available to the public, everybody can take advantage, everybody can gain like the NFL. And what I love about the NFL is they are drug tested like you wouldn't believe, so when you look at an NFL player and their conditioning, that's natural, that's real.

Dave:

Okay. That makes a lot of sense. It is real.

John:

Yeah.

Dave:

I came up with this idea, I read about it in, actually, in [inaudible 00:31:13]. It was the first time I really elucidated it. I call it slope of the curve biology. We've often thought for endurance exercise, it's like how much time, how many calories did you burn? What was the total energy output? This comes from calories in, calories out kind of thinking. But it appears that the most biological adaptation comes from not the area under the curve, the total volume of work you did, but has to do with how quickly did you go from zero to 100 and back to zero? So, a very brief spike of almost anything causes way more adaptation than spiking up to 70% and holding it [crosstalk 00:31:48].

John:

The stronger the stimuli.

Dave:

Yeah.

John:

Yeah, for sure.

Dave:

It's not just the strength of the stimuli, it's the rapid onset and the strength. In other words, like a vertical wall of, "Oh my God, I can't do this," causes way more benefits than a, "I could barely do it and I did it for three minutes." Right? Does that seem to jive? I feel like the X3 is one of those things that turns on that muscle stimulation faster than lifting heavy stuff.

John:

Oh, yeah. I mean, no matter what, you're training with higher weight with more repetitions than you could ever handle in a conventional setting. So, yeah, absolutely. It is the most intense stimulus of muscles that we're going to get and the muscles respond.

Dave:

Cool. One more question for you. In your new book, you talk about some nutritional recommendations, and you and I, like with Bulletproof diet weight, we're very close to agreement. How did you dial in to where you ended up? I mean, there's a few small differences, but how'd you get there?

John:

I'm glad you're asking this question. So, my approach was... You had a whole series of challenges as a Silicon Valley executive to get past when it came to your brain function, when it came to just brain fog [crosstalk 00:33:09] losing it, or just being tired all the time. For me, it was more like, okay, I need to recommend a nutrition program, something. I was ketogenic before, without really even knowing... I told you, Dan Duchaine wrote about it in his book years and years ago, and it was like all these bio-hacks that involved all these highly illegal drugs. And I was like, "Wow, this book is useless with the exception of this one section about ketogenic nutrition." That's the only thing I could do in that book. Everything else was just like curiosity, like, "Wow, I'm surprised you didn't die running this experiment, Dan." Coincidentally, he did kind of die young. Nobody really knows how. I think there's a documentary film coming out about that guy's life, and I can't wait to see it.

Dave:

Interesting guy. yeah.

John:

Very interesting. Chris Bell is doing a movie.

Dave:

Oh, is it Chris?

John:

Yeah.

Dave:

Cool.

John:

Yeah. Yeah, yeah, yeah.

Dave:

I was just texting with him yesterday. Cool.

John:

Yeah, what a great guy. Yeah. And it'll be an amazing movie, as all of his movies are. So, I knew about ketogenesis and I knew that it might be somewhere in there, but I wanted to pick the nutrition that was associated with the longest life because that's really where we all want to go. We want to live the longest. Now you start reading nutrition research about longest life and because Nabisco wants everybody to be vegan only because they know that vegans don't eat kale, they eat cookies and cakes, that they want to promote their own products. So, there's so much bizarre funding conflicts in nutrition research. And so, I tried to go in a different direction, like what are the things about the human body that make people live the longest? And then when I go from that point, then it doesn't matter what the conflicts are because I already have a start point.

So, what was going to make people live the longest? There were two things that came across that were absolutely 100% stark, and it was being strong and being lean. If you're strong and lean, you're going to live longer than everybody else. So, I was like, "Okay, strong and lean." How do you get strong and lean? what's the best nutrition for the greatest amount of strength and the lowest levels of body fat? And it's kind of ketogenic carnivore type nutrition. Now, I wanted to be at a caloric deficit more often than not so I chose lower levels of body fat and higher levels of protein. That's really the only difference between what you're telling people and what I'm telling people?

Dave:

Yep.

John:

Now-

Dave:

And my y target, by the way, isn't as lean as you can get. My target is 10 to 13%, like longevity levels of leanness, and what you're talking about may actually confer longevity because you're saying, "I have extra aminos." I don't think we have enough evidence to say that that's the maximum longevity diet, but I got to say, you look pretty good. What can we do? We don't know [inaudible 00:36:25].

John:

Yeah. And like I said, the information that would go against what I'm doing and say your body fat is too low, these were people that were starving to death. So, they had all kinds of problems that I don't have. Yeah.

Dave:

What I'm saying is we don't know, but it's pretty cool.

John:

But also, I also may determine, I may determine that 7% is just as low as my body really wants me to get. It's a shame that... I don't even want to call it a sport. The pageantry of bodybuilding is... And bodybuilders will agree with this. I'm not making fun of bodybuilding. It is a sport of illusions. I can hold my arm... Get the-

Dave:

The mic out of the way?

John:

I can hold my arm like this, or like this. It looks bigger when I hold it up at an angle because of the cross section's longer.

Dave:

Right.

John:

Right? And they know this. The guys who are presenting themselves on stage, they want to do so, so that if they have a wide set of hips, they want to pivot their waist just a little bit every time, showing the audience their hips so the waist looks narrower and the upper body looks bigger. They're contouring muscle. So, the tan they put on is a little darker where the shadows are supposed to be. It's a little lighter where the shadows aren't. Then, of course, they... It's just all sorts of things they're doing with carbo-loading right at the last minute so the carbohydrates go into the muscle and not into the skin, because there's a lag there. So, what they look like on stage or for a photo shoot, they only look like that for maybe like an hour or two. And it's like, if you know that because you know people who are in the sport, it loses its luster, and you're like, "Okay."

This is really calculated nutrition timing that has nothing to do with health. It has to do with creating an aesthetic. Yeah. I just kind of forget that whole thing. But the problem is, it's given a lot of people an unrealistic expectation as to what lean is. I say, you want to look for how lean you probably ought to be. Look at performance athletes because-

Dave:

That's exactly right.

John:

Yeah. A bodybuilder-

Dave:

That crazy lean...

John:

Yeah. A bodybuilder will fall over if they try and sprint when they look like that at the contest.

Dave:

I have lost track of the number of fitness competitors, especially women, who say, "I never looked better and I never felt worse."

John:

That's right.

Dave:

Yeah.

John:

Yeah. Yeah. I don't know. And of course, I'm presenting a product I want people to be excited about, I want to look at my best, but do I want to go down that same road? Now, I dehydrated and carb-loaded one time. I looked amazing. I felt like total garbage. I felt like I had like 11 Red Bulls. I mean, just splitting headache. I couldn't open my eyes all the way. Light hurt my eyes. Doubled over in pain from my stomach.

Dave:

But you looked good so it was okay.

John:

Oh yeah. I looked like a skin cadaver. And again, it lasted a couple of hours and it was like a week of just shit I went through to pull that off. The photographer was like, "Was it worth it?" And I looked through the pictures and I'm like, "I don't really know."

Dave:

Men's Health came to my house a few years ago and it was supposed to be a thing about upgrade labs, and it was. They were filming all this cool gear that I use. And then like, "All right, take your shirt off," and I'm like, "Hold on a second, guys. I know what people do when they take their shirt off for Men's Health." Right? Diuretics and all this crap. And I'm like... I had spray tans. I haven't done any of this crap. And the photographers are like, "Well, all right, if you don't like it, we won't do it." So, I'm standing there in then cryo machine with my shirt off, and I'm like, "This is actually just how I look. You can see stretch marks in the picture." And I was somewhere around 10.1% body fat with no prep. And you know what? I looked pretty good. Right? But I did not look like Wolverine. Right? And that's the difference.

John:

Wolverine doesn't even look like Wolverine. He just did for that one scene.

Dave:

Exactly.

John:

Yeah.

Dave:

If you're listening to this going, "Oh wait, maybe my goal isn't to look like that all the time," because the look of a hunted animal is the look that we're achieving and it's not attractive. It's sculpted and interesting, but in terms of actually even attracting the opposite sex to look like a good partner in bed, we know in our bones that someone that lean is a stressed, hungry person, and it's not attractive. So, it's okay to have a little bit more body fat and to be healthy and muscular and energetic. So, there's something with our perceptions and our desires there that's getting set by social media that'll probably get turned off over a while.

John:

Sure.

Dave:

Yeah.

John:

Cool.

Dave:

Well, John, I do want to congratulate you on the X3. It's really taken off. Like you said, 100,000 customers.

John:

100,000. It's up there. It's more now, but yeah.

Dave:

It's cool. The very first thing I got to play with when it was an unknown product and it's proven over the last three years that it actually works and you've got all the pro athletes on it. Jaquishbiomedical.com is the best site for it? J-A-Q-U-I-S-H?

John:

Jaquish Biomedical... Now, people have trouble with my last name.

Dave:

Yeah, it's hard to spell.

John:

Yeah, yeah. I have a landing page and you can get to anywhere from there. It's just Doctorj.com. D-O-C-O-R, the letter J .com.

Dave:

Drj.com, D-O-C-T-O-R-J.com. Yeah. So, guys, go there. You can check out all the cool stuff that John's working on. He knows a thing or two. And is there a landing page for your new book, or people go to Amazon, or what's the best way to get it?

John:

DrJ.com. There's a book. The link to the book is there. Then it says like Superior Nutrition that takes you to Fortagen, superior Exercise that takes you to X3, and then there's a couple other scientific links.

Dave:

Okay. And the book is called Weightlifting is a Waste of Time.

John:

Weightlifting is a Waste of Time.

Dave:

I would agree with that 100%, and that you can do better in less time. It's a whole hypothesis for a lot of the work that I'm doing in different businesses. Thank you for just continuing to push the limits. I want to know what happens with your how lean can I go. I want to see your labs when you're the leanest. Show me your CRP and your Lp-PLA2 and homocysteine and all that, and let's see if you can break some new barriers there, John.

John:

That's right.

Dave:

All right.

John:

Awesome.

Dave:

Thank you, brother.

John:

Thanks, Dave.

Dave:

If you liked today's episode, you know what to do. Read the book. There's always something to be picked up. There's a lot of new research in here. You're going to learn about how to put muscle on faster than you think you can. And a lot of other new and interesting thinking in a way that's worth your time. And it's called Weightlifting is a Waste of Time, so check it out. All right.