

## The Human Upgrade: Episode 1134

[00:00:00] **Dave:** You are listening to The Human Upgrade with Dave Asprey. Today is a fun episode because I'm recording it live here in South Bay Area in California, my old stomping grounds, at the Mind Pump Media studio, recording room, whatever you want to call this place. That's because interviewing Sal Di Stefano. Sal Di Stefano. You, Italians, what the hell? How does this--

[00:00:31] **Sal:** Don't worry. Everybody says Di Stefano.

[00:00:33] **Dave:** Stefano. All right. I got you.

[00:00:34] **Sal:** But you said Sal, right?

[00:00:35] **Dave:** So Sal Di Stefano.

[00:00:36] **Sal:** You got it.

[00:00:37] **Dave:** There we go. All right. I was going to say, a, I don't know why I feel like I saw Godfathers or something. I'm like, Stefano. Anyway, my bad. So it's actually really fun to talk to you because in the world of biohacking, when I was like, what groups am I trying to pull together? What are the people who are best at controlling the human body, controlling their own biology? You have the longevity guys like me, you've got the neuro brain guys in special forces, and then you've got bodybuilders and powerlifters.

[00:01:12] It's like the very best of the best. Oh yeah, I want to move this much fat, do this with this hormone. And maybe the most edgy is in that area. Even more edgy than some of the longevity stuff when you look at the history of what people have been willing to do for body building.

[00:01:28] So you're a cool guy because starting out as 14-year-old who's skinny, say, I'm going to get a little bit fit, and at 19 you're a major top trainer. And then at age 28, you start Mind Pump Media. And so you've been growing a meaningful business all around this aspect of biohacking, and fitness, and health. So I want to dig in on things you've learned and especially what you've learned about resistance training because you wrote a big book on it.

[00:01:58] **Sal:** Yeah, so my passion is really about helping people through fitness. So fitness was my favorite hobby. Now, I started personally working out because I was insecure about my body, so I had some body image issues. I felt like I was too skinny, started lifting weights, fell in

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love with it because it was something I could do to change myself, really engulf myself in everything I could learn about strength training, and supplements, and diet. I even read old Soviet studies on herbs and supplements to--

[00:02:30] **Dave:** Soviet are awesome.

[00:02:31] **Sal:** Well, you mentioned bodybuilders and strength athletes. The strength sports, they had massive government funding during the Cold War because you had the Soviets versus the US, and the Soviets, their studies were incredible on--

[00:02:46] **Dave:** Way better.

[00:02:46] **Sal:** When the iron curtain came down, their strength coaches came over, and then now the whole world is benefited from some of the stuff that they studied. But they studied everything from peptides to hormones and different types of training, programming and diet.

[00:03:00] And the bodybuilders are the experimenters of the strength training world. What athletes now use for performance enhancement steroid, bodybuilders did way before. We talk about anabolic steroids is just one of them. There's many hormones and compounds that they experimented with, and I always found that very fascinating.

[00:03:20] Now, I personally, for my clients, really worked with the everyday average person who just wanted to become fit and healthy. And so that's where I focused a lot of my attention when it came to my career. Personally I love learning about that fringe stuff. I always thought it was very fascinating.

[00:03:37] I remember learning about there's a compound from dynamite that bodybuilders found, burned a lot of body fat, but also could potentially kill you, just to give you an example of some of the-- DNP.

[00:03:46] **Dave:** Oh, DNP. Yeah.

[00:03:48] **Sal:** Yeah. Interesting. So anyway, it's a fascinating space, but where I really put most of my efforts was trying to figure out how to get the average person to become fit and healthy and to stay consistent. In the beginning of my career was how to get people results, but halfway through I realized that I needed to spend more time on figuring out how to get people to keep those results.

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[00:04:11] Now, people lose weight all the time, but everybody gains it back. People start a workout program, but then they stop. People change their diets and then they go back. And so the back half of my career was really figuring out how can I take the average person and help them become consistent with something that improves their health and fitness, at least on the journey or at least considering it and doing something that is both effective but sustainable?

[00:04:34] And so that became my passion for a long time. And I wrote a book on strength training because of all forms of exercise on a time per time comparison, apples to apples, the returns you get on the time you spent with strength training, all things being equal, just far surpass any other form of exercise.

[00:04:55] In fact, it's the most perfectly aligned form of exercise for modern life. If you look at the ills of modern life, from inactivity to hormone disruption to access to food all the time, strength training is really perfectly positioned. And so the book I wrote was The Resistance Training Revolution because I believe that we're on the cusp of this exercise revolution where strength training becomes adopted as the main form of exercise, surpassing cardio, which is how everybody believes you need to work out to become fit and healthy.

[00:05:31] **Dave:** I look at cardio as the vegan diet. Everyone says you should do it. They all try to do it. They all get weak and start whining. And if you look at strength training, you get meaningful results for it like you get if you eat a steak. But you don't get if you eat a fake steak.

[00:05:49] And I am a little angry that when I was a teenager and I was really desperate to lose weight, that I bought a cannondale and became a roadie, and I'd ride 20, 30 miles a day in Albuquerque. I never lost any weight doing that, but I should have. But maybe it's because I just ate one potato chip too many.

[00:06:09] And that thinking almost feels like self-abuse. I'm going to malnourish and overstress myself. And if you want to get VO2 max, it'd be cardio respiratory fitness. I'm all over doing that. I just think endurance cardio is bad for you over time.

[00:06:24] **Sal:** Well, any form of activity done appropriately, we have to say appropriately, applied appropriately, meaning for the individual, the right intensity, duration, whatever, and there's a lot of factors that influence that--

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[00:06:34] **Dave:** Sure.

[00:06:35] **Sal:** Are better than nothing.

[00:06:37] **Dave:** That's a fair point.

[00:06:37] **Sal:** The human body is an adaptation, and the way we adapt, a lot of it's been influenced over how we evolve. If you're constantly sending a signal to your body that says, I'm moving a lot, I don't need strength, and I'm also consuming a little, your body adapts to become more efficient.

[00:06:58] It's no different than an AI car that changes its engine and its fuel efficiency based on your driving habits. So if I'm driving 300 miles a day at five miles an hour, my car's going to become extremely efficient with gasoline.

[00:07:11] It's not going to be very fast and powerful, but it's going to become very efficient. There was a study done that I quote all the time one of the first of its kind where they studied modern hunter gatherers, the Hadza tribe.

[00:07:23] **Sal:** And they went down there and through really good sophisticated testing, were able to test their metabolic rates.

[00:07:29] And what they found was that these modern hunter gatherers who move all the time in comparison to the average person-- I mean, hunting and gathering is far more active than modern life. No electronics. Hunting is like wounded animal. Run after it until it gets tired, drag it back, gathering.

[00:07:44] Even the resting positions are in a squat. So even the resting positions are active in comparison to ours. They were burning similar amounts of calories to the average Western couch potato. And that makes perfect sense if you understand evolution. If I don't need much strength and I'm moving a lot and there's not a lot of food, which was how we evolved, my body learns how to burn less calories.

[00:08:07] And so I essentially teach my body to run off less and less and less and less calories, effectively slowing my metabolism down. Now, strength training sends a very different signal, especially when you combine it with adequate nutrition, protein and nutrients and strength training, which strength training doesn't burn a lot of calories.

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[00:08:25] An hour strength training in comparison to an hour of cardio burns far less calories. But the signal it sends is we need strength. We need strength. We're in danger. We need more muscle and more strength. Oh, and by the way, we're getting adequate nutrients. So don't worry about becoming less efficient with calories.

[00:08:43] And so what your body does is it says, oh, that's the priority. Let's build more muscle. Let's get it faster metabolism. Let's speed up our metabolism. Now, there's people that will say, oh, the science shows a pound of muscle only burns this many calories, or whatever. The human metabolism is far more complex than that, way more complex.

[00:09:02] The second most complex thing that we've identified is mammalian metabolism, the human brain being the most complex. And your body can become more or less efficient with the same amount of lean body mass. If you send it the right signals, the right stimulus, and you move it towards building muscle, your body learns how to burn more calories. You get a faster metabolism. You get more muscle. You become more insulin-sensitive.

[00:09:25] And then the part that a lot of people aren't necessarily aware of is the environment that your body needs to produce to build muscle through hormones is a hormone profile that most people are looking for. So if you want to send a signal that tells your body to have a more youthful hormone profile, which is also known as an anabolic hormone profile, strength training, adequate nutrition, good sleep does that.

[00:09:51] And a lot of people don't know that. So you get a lot of people trapped, like you were, where they, oh, I need to lose weight. I got to go burn calories. I got to do this manually. Oh, and I got to eat less.

[00:09:59] **Dave:** Doesn't work.

[00:10:00] **Sal:** And initially you'll lose some weight, but your body will adapt, you'll plateau, and then you're left with this, eat less, move more. Maybe you say, okay, I'm going to do this even more. So now I'm working out five days a week, and I'm eating 1,500 calories. And you lose a little bit more weight, and then you plateau again, and you're like, what am I going to do now? Keep eating less, keep moving more? And what happens if I miss a week?

[00:10:22] **Dave:** You can't do it. Plus, you feel like crap all the time too.

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[00:10:24] **Sal:** Yes. Because that type of activity, when you're constantly telling your body to become efficient with calories, it is an anti active tissue form of stimulus. Strength training is proactive tissue, pro muscle. The side effect being, or the offset effect being fat loss.

[00:10:45] When I'm going anti tissue, people listening might be like, what? That sounds crazy. No, the data on this is super clear. If you diet and do nothing, or if you diet and do cardio, half the weight, almost, of the weight that you lose is muscle. Now your body's not burning the muscle, but it's paring it down, it's adapting, so you end up smaller, same flabbiness, but now with a slower metabolism and probably a worse hormone profile. And if you follow that long enough, like you probably did, you start to really feel terrible.

[00:11:20] **Dave:** Oh, just monstrously terribly awful all the time.

[00:11:24] **Sal:** Right. Whereas strength training, you hear a lot of biohackers. I love the fact that you're talking to me because you're the guy that started it all. A lot of biohackers like to talk about mitochondrial health, improving the health of your mitochondria, build some muscle, build some muscle.

[00:11:43] It's one of the most effective ways you can improve mitochondrial health and insulin sensitivity. You've now just increased your capacity to store glycogen. Muscle is very insulin sensitive. Strength training increases androgen receptor density. You don't even have to get more testosterone. If you build muscle, you're more sensitive to the testosterone that you currently have, but you probably will raise it sometimes.

[00:12:03] **Dave:** You probably need to do both.

[00:12:05] **Sal:** Well, my point is it's one step closer.

[00:12:07] **Dave:** Yeah. It'll make what you have go further.

[00:12:09] **Sal:** That's right. That's right. There was an interesting study they did on testosterone levels of muscle building. Of course, this was all within range of what would be considered okay or healthy, not the range, what you would go to the doctor and get. But I think the range cutoff was like, 450 to 700 or something like that, total. And the free was pretty good. And they found that the testosterone levels were not a great predictor of muscle growth. It was the androgen receptor density that was a much better predictor.

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[00:12:37] **Dave:** That makes a lot of sense.

[00:12:38] **Sal:** Yeah. So it's a form of exercise that hasn't been sold well, unfortunately, definitely not to women. People don't view it as a longevity tool. They're starting to, but they haven't for a long time.

[00:12:53] **Dave:** It's one of the most important longevity tools, at least to live as long as you're supposed to. So it doesn't look like exercise has any ability to extend your life, but it does have the ability to keep you from being sick when you're old. And so I take exception when you see guys like Peter Attia, saying the number one longevity thing you can do is exercise. It's actually, no, Peter's not a longevity doctor.

[00:13:21] He's a die at your normal age doctor, but be happy before you die. And I support that, but it's not what we're doing, which is we're extending human lifespan by 20, 30, 40 years. That's where the new science is at. And do you need muscle mass to do that also? Yes, you do. But I wouldn't argue that exercise isn't the most important thing for longevity, but it's important.

[00:13:44] **Sal:** It is, because here's the comparison that I'll use. If you were to look at a bunch of vitamin D deficient people, and then you gave them vitamin D, you would say Vitamin D's a miracle drug. The reality is you're comparing what's normal to unhealthy. The reason why strength training is connected to longevity is not because of its magical effects, but rather because it's offsetting all the negative crap that you've been doing. So because we're inactive, we're not lifting heavy things, we don't eat properly, we're weak and brittle. If you get old, weak and brittle, you're going to die sooner than you're supposed to.

[00:14:18] Strength training allows you to live as long as you're supposed to. Backing up what you're saying, I don't think it's going take you past your limit, but it'll prevent you from going short of it.

[00:14:30] **Dave:** Right. And you don't want to be unable to move when you're older. So I am all about having adequate muscle mass for metabolism and functional movement. Those are both necessary for you to live to a rip old age of 87. And if you want to live to 187, it's going to take actual longevity science in conjunction with exercise, and good food, and all that.

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[00:14:53] And I think it's a bit scary right now that Peter and a couple others are saying, well, exercise is all we can do because there's no hope of extending human life. Actually, no, we're doing it. There's so much magical science which means you're going to be able to continue maintaining muscle mass when you're 120.

[00:15:11] **Sal:** Yeah.

[00:15:11] **Dave:** And right now you see a few people in their 80s, even a 100 who have meaningful muscle mass and look at guys like RFK. He's totally got muscle and he is doing pull-ups and pushups in a way that's unprecedented for someone who's 70.

[00:15:25] **Sal:** Yeah. You mentioned movement. That reminds me of a point I like to make with strength training is that there's this myth around building muscle mass and strength that it can cause loss of mobility and you get tight. Mobility is range of motion with strength and stability.

[00:15:43] So you can be very flexible, but weak. That's instability. That's like a baby. So as you get older, one of the best mobility tools you could have is just to not lose strength, or build some strength. It allows you to keep moving through these deep ranges of motion, reach up and grab something at the top of the cupboard or squat down and stand back up, or get up off the floor without having somebody help you. That's where mobility comes from, not from flexibility. People think flexibility-- flexibility is a component of mobility, but without strength it's instable.

[00:16:17] **Dave:** Oh, it's totally true. If you're so flexible, you just bend over backwards and you can't get back up, you're doing it wrong. And functional movement is something that I've been very interested in since I wrote the first book on biohacking back in the Bulletproof Diet.

[00:16:32] And I talked about some of the very basic things you could do, like measure your arm length when you're bending over past your toes, but it's been a dark art, and there's people who are experts in functional movement, guys like Kelly Starrett have talked about it.

[00:16:46] And right now we're getting to the point where we can use AI to help do functional movement assessments because if someone's 50 and they look like they're reasonably healthy, but their functional movement's all jacked up, they're not going to enjoy the rest of their life unless you fix that. And that should be a top priority, as important as adding muscle mass.

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[00:17:06] **Sal:** Yeah. Because it's all controlled by your CNS. There's a wonderful feedback mechanisms with the human body that tell your body what is safe movement and what is unsafe movement. And what your body will do--

[00:17:20] **Dave:** It's proprioceptors, man.

[00:17:21] **Sal:** Yeah. And it'll limit your movement to what it considers to be safe. And if you move outside of what is considered safe, then injury tends to occur. Now, what's interesting about this is if you exercise and strengthen yourself with the same planes of motion, same exercises, you can actually offset the ratio of strength from, let's say, sagittal plane to frontal plane, to the point where you can actually increase your risk of injury.

[00:17:47] It's almost like putting more horsepower than your car frame can withstand. So it's also important when you exercise that you move in multiple [Inaudible] of motion, that you move laterally, front to back, that you do all the different movements so that you maintain balance while building strength.

[00:18:02] Otherwise what happens, and you see this often with strength athletes that compete in a specific lift-- I just do the power lifting, so bench, deadlift, squat-- silly injuries because they lack lateral stability, for example, because they don't-- so they're so strong and so powerful in this one range of motion that when they move in an unexpected way, they generate a lot of power, their stability can't support it, they end up injuring themselves.

[00:18:26] So that balance is very important. But if you train properly-- we create workout programs. We have many workout programs, and they're really designed for people to go through each one of them so that you end up training the body in its entirety, avoiding these types of things because a lot of people will also start strength training and they'll discover these amazing compound lifts and they build so much muscle, then they stay there and they neglect all the other rotation, and lateral movement, and all the stability movements. And then they'll start to find five, six years later, why am I becoming more injury prone? I thought I was supposed to be less injury prone.

[00:19:03] So there's definitely science to the programming of workouts is important to consider as well. But once you do that, it's amazing. One of the other things, and just to address what you

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talk about, how you say 20 minutes of exercises, what you've done for your body, the amount of strength training required to produce some result is remarkably little.

[00:19:22] In fact, there was some studies that showed that to prevent muscle loss, so not even building muscle, something like one session every two weeks would be enough to do it. So I want more people to know this because one of the biggest roadblocks to people and their fitness, or their health and mobility is they think they have to do it all the time, which you really don't.

[00:19:51] You don't have to do it all the times. If you're smart and you've got good workout programming, you don't. Now, there's benefit to moving every day, for sure. Lots of benefit, but you don't need a lot to get what people are typically looking for when they think they need to do four or five hours a week type of deal.

[00:20:07] **Dave:** I love it that you're willing to say that. And look, if you're a strength athlete, if you're looking to be a fitness competitor, you want to have well-rounded muscles on every place you can have a muscle on your body, it's going to take more than 20 minutes. And what I'm hoping people who never go to the gym will hear in this and all the other stuff in my latest book as well, is, look, that's okay.

[00:20:30] If you don't want to be one of that type of person doing those things, then do enough to have just quads and a butt and a chest for the metabolic and aging benefits. And that in and of itself is so easy that you can do it, and I'll help you do it if you come into Upgrade Labs, go to any gym. If someone came to you and said, I wanted to do that, you know exactly what to do for them here, and it would take you 20 minutes probably, right?

[00:20:53] **Sal:** Yeah. Well, here's the benefits of exercise. You have the stimulus for the adaptation, which is what a lot of people are looking for, but then there's a lot of benefits to just simply moving, moving the body. There's benefits for the mind. There are these immediate temporary effects that you get every time you move, so there's a long-term adaptation effects.

[00:21:13] But then there's just the I get up and move and neuro neurotransmitters change, and I get some hormonal changes, and I feel uplifted. Movement does that. The mind and the body are intricately connected. There's also just practicing movements. There's also this misconception that workouts need to be extremely intense to be effective.

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[00:21:34] Intensity is a factor, but you can-- and this is what I used to tell my clients towards the half of my career, and I became very successful doing this. With their consistency, I said, go to the gym a couple of days a week and practice for movements. Treat exercises like skills, not as a way to just to hammer my legs, but it's a squat. It's a movement. It's an overhead press. It's a movement.

[00:21:58] Practice them like a skill, which means you're not going to train them to absolute fatigue. You're just going to practice and perfect them. And when people did that, what they found was, I have more energy when I leave than I did when I walked in. I don't get sore. I feel good, and I'm getting more of the exercises than I did before. I like to really communicate that message to people.

[00:22:18] I think daily movement's very important. So I'm always very careful with the, you only need this much. To send those signals in motion, yeah, you don't need much at all. I would say the best prescription that I've ever had with clients was after your breakfast, lunch, and dinner, to move for 10 minutes. And that's 30 minutes of activity every day. And it's postprandial, so you get the glucose benefits.

[00:22:44] **Dave:** A walk after meal is a really good thing. Or do 20 air squats if you don't have time for a walk.

[00:22:51] **Sal:** Come and down off your heels.

[00:22:52] **Dave:** Yeah. Get a CGM, the continuous glucose monitors that are worn for a couple of years, and you can tell every time you do your squat, go for your walk, your blood sugar curve goes down and--

[00:23:03] **Sal:** And it's also attached to something that you do three times a day. So one of the things that you really have to master as a trainer or coach are how to modify behaviors.

[00:23:13] **Dave:** Mm-hmm.

[00:23:14] **Sal:** We can know all the different methods and things you should do, and I could write you a meal plan, and I could tell you a workout and all, but really what you have to master and be good at to be a really successful trainer is how do I get people to do this and to do this forever?

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[00:23:29] And one of them is to attach movement to things that they do anyway. So I could tell you, go do a 30 minute walk every day, but I'm way more effective in terms of consistency when I told people walk for 10 minutes after breakfast, lunch, and dinner.

[00:23:44] **Dave:** Yeah.

[00:23:44] **Sal:** Just because it was attached to, I ate breakfast, I ate lunch, I ate dinner.

[00:23:51] **Dave:** My former wife had a thing she would do. She would put a butter MCT and matcha in the blender, and then while the blender was blending it, she would do squats. There you go. you're 20 or 30 squats in while you're making your smoothie in the morning. And I thought that was brilliant because you just build it in.

[00:24:09] And so if you're listening to this, there's a great number of athletes and people who are really into working out, who listen to my show, and there's a bunch of people who are saying, look, I actually don't have time for all that, and I would like to do it. So guys, what's the bare minimum you need to do to live a long time?

[00:24:29] And this isn't going to get you in shape to go climb Mount Kilimanjaro. It's not going to make you able to go get in a big fight, but it'll give you enough to have a working metabolism. And if you do get in a fight, you'll probably survive. And my evidence for this is, oh, two weeks ago, I did one of those weekend survival things that included four hours a day of BJJ, including eight rounds of like full force no punching, struggling for knives and guns, self-defense training kind of stuff.

[00:25:04] So, I don't know, two days in a row of that, I survived. I actually won some of time. And I'm serious about my 20 minutes, but I'm not just lifting stuff. I'm doing AI-manipulated things and all the lab stuff. And if you wanted to do more, more can be better. And there's an upper limit. And what I found is when I was young, I went way beyond the upper limit.

[00:25:29] **Sal:** Yeah, of course. You know why, Dave? It was fuel. This is what a lot of people run into. And this is, again, getting to the behavior. People don't work out because they are caring for themselves. They're working out because they hate themselves. So your workouts become a punishment.

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[00:25:46] And in fact, at first, it's cathartic. At first it's cathartic to leave the gym and feel like throwing up because I'm fat, or I'm gross, or I'm whatever, or I'm inadequate. But you're beating yourself up is what you're doing. And diet becomes restrictive. Doesn't become nourishing. It becomes restrictive because you hate yourself. So it has to come from self-care.

[00:26:06] **Dave:** So many guys, you break up with someone, get ripped, working out the stress. Looking at exercises, nourishment is a different view, especially for guys.

[00:26:20] **Sal:** Oh yeah. If you go to the gym and you say to yourself, I'm going to take care of tight now, you're more likely to train appropriately. If you go to the gym and say, I hate myself, I'm gross, you're not going to listen to your body signals. You're going to probably overdo it and burn yourself out and cause yourself a lot of problems.

[00:26:37] Look, I've worked in the fitness space. I'll tell you what, the fitness fanatics are the consistent ones. Nine out of 10 times they're doing too much. Nine out of 10 times when they come to me and say, why am I not getting results? What's happening? I look at everything like, back way off and eat more. And if they listen, which half the time they do have the time they don't, the results are just remarkable.

[00:27:01] **Dave:** Astounding. I've seen it over and over. Eat more, especially women. You're undernourished. You're cold, and tired, and anxious all the time because you're starving. And it's profound what happens in just one or two day.

[00:27:15] **Sal:** Yeah, yeah. We typically will reverse diet someone is what we'll do. We'll slowly increase their calories, make sure they hit their protein intake, bring their volume of training way down, eliminate all cardio. I'll let them walk every day, and then you'll see their hormones start to balance. They get their period back.

[00:27:30] Oh my God, I feel amazing. I feel so strong. How am I getting leaner? I'm eating more food. And it's like, you're not fighting your body. If you fight your body, you're going to lose. But you have to go into it with the mentality of self-care. Otherwise, at some point you'll rebel against yourself. This is why when people go off a diet, they don't just eat one cookie. They eat a whole box. Because the whole time they were saying, I can't. They were terrorizing themselves.

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[00:27:56] **Dave:** It doesn't work.

[00:27:57] **Sal:** No. At some point, if you do this the right way and you develop the right relationship, then when someone offers you a cookie, you either say, I want one or I don't. And it's a much different relationship, and it breeds balance is what it breeds. And that was my biggest goal, and it continues to be my biggest goal, which is how can I get the average person to be able to do some of this stuff consistently. You know this. You're in the same space. You follow the rules, the default is poor health.

[00:28:26] **Dave:** Yeah, I've been there.

[00:28:27] **Sal:** It's mental illness and poor health. That is the default. Everything is telling people, from every angle, to do things in a way that's going to make them sick, fat, and unhealthy. In fact, to be healthy is, for lack of a better term, an active rebellion. So you have to go against the grain.

[00:28:45] And unfortunately our space is just as polluted. So much bad information is coming out that these people don't know which way to turn. And I did that diet and I tried that, and I took these pills and it didn't work for me. And so we're trying as hard as we can to get the right message out.

[00:29:01] **Dave:** I was reading a blog post you wrote once where you said, vegans are bad people.

[00:29:05] **Sal:** Did I say that?

[00:29:08] **Dave:** No, you didn't, but you thought you might have, which was what I needed to hear.

[00:29:11] **Sal:** No, I think--

[00:29:11] **Dave:** Talk to me about the vegan diet, not vegans. Guys, I love you. I know lots of you listen to my show. I tease you because I was a vegan too. Self-harm isn't okay. And so I love you. Anyway.

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[00:29:21] **Sal:** Now, here's what's interesting about veganism. If you follow the consistency with following a vegan diet, unless a person is vegan for strong moral and ethical reasons, if they literally believe like, I do not want to hurt an animal--

[00:29:36] **Dave:** Yeah, but then they're just bad at math.

[00:29:38] **Sal:** Well, we can go there, but people who believe it, they're like, don't want to hurt animals, their consistency is different. But the average person who becomes a vegan, their consistency is like with any other diet. They fall right off.

[00:29:50] **Dave:** Well, it's because it makes them sick.

[00:29:51] **Sal:** Yeah. Like any diet, you're not developing the right behaviors and the right relationships with diet. But the vegan diet, in my strong opinion, and I'll back it up, the way it's being promoted, especially tying it to morality, and I don't mean morality with animals. They've done that forever, but morality with the environment and the earth and all that.

[00:30:10] **Dave:** That's bullshit.

[00:30:11] **Sal:** Not only is it bullshit, but it's dangerous, Dave. Because if you look at the average American's diet, a good three quarters of it is heavily processed foods. What is the other quarter of it? Meat, eggs, and milk. You are going to convince millions of Americans to go completely processed. And if you don't think that's going to be an absolute devastating travesty to the planet, not just to humanity, you're fooling yourself.

[00:30:36] **Dave:** I think you might be wrong about that because I just picked up a bunch of shares of the big pharma companies. And so very clearly if everyone goes on all processed food, then I should be able to make a ton of money on my big pharma shares. So maybe it's good for--

[00:30:52] **Sal:** Yeah, pharma company.

[00:30:53] **Dave:** Oh, maybe not. But it's so dumb that every time you see that on the news or you see one of the animal rights terrorist organizations promoting this in some way, I'm starting to just think, do they think we're all that dumb? Because 90% of the people I know who've been on vegan diets are not on vegan diets because it made them sick.

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[00:31:12] And they lose muscle mass, they get kidney stones, they get all these problems, and all that stuff happened to me. Not the kidney stones, but lots of the other oxalate. And I just don't want people to go down the same thing that I went down, whether or not you're in the gym. The worst thing though, guy says, okay, new year, new you. I'm going to go vegan. I'm going to hit the gym every day. What's going to happen?

[00:31:32] **Sal:** You're going to have a tough time. It can be done. Here's the deal. A good diet needs to be is typically well planned. A good vegan diet, you need to really plan the hell out of it and piecemeal it together with supplements and various foods.

[00:31:50] **Dave:** So it's highly processed.

[00:31:51] **Sal:** It's very difficult. It's very difficult to do. Can you do it? Yes. It's far more difficult than just an omnivore, lack of a better term, "balanced diet". You probably would want to supplement with protein. You definitely want to take creatine.

[00:32:05] **Dave:** What's the best vegan protein?

[00:32:07] **Sal:** Oh, typically a blend, a combination of things. Soy, if it's fermented, probably okay. I think too much soy can cause problems. I know I just scared--

[00:32:16] **Dave:** I'm just thinking the oxalates in soy. I'm like, okay. It's a weird trade.

[00:32:20] **Sal:** Yeah. I know it was a trick question, but if you're a vegan, there are some protein batteries that are better than others, but they're not going to be as good as your animal sources.

[00:32:28] **Dave:** I always recommend defatted hemp protein because it's got the highest IgG. It's lower. Actually, I don't think it has any oxalate. Maybe it has some. Don't trust me on that. It seems like the least evil, but brown rice protein and pea protein are just garbage proteins compared to even whey in terms of bioavailability.

[00:32:46] **Sal:** It'll be tough with a vegan diet, that's for sure. You're behind the eight ball. But can it be done? Yes, it can. You got to plan the heck out of it, but you'd be better off going with a more omnivore approach. Eat easily digestible foods. Hit your protein targets.

[00:33:02] **Dave:** You write some controversial stuff online aside from your take on vegans that you didn't actually write, that I put those words in your mouth.

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[00:33:09] **Sal:** No problem.

[00:33:09] **Dave:** Tell me why carbs make you fat.

[00:33:14] **Sal:** They don't, but they can. All right. So yeah, we're going down this path. All right. Excess calories make you fat. All right, everybody, relax. I know it's more complex than that, but at the end of the day, okay, calories in versus calories out is a real thing now. What you eat and how you live and what you do affects the calories outside of the formula. That's why it's not as easy as just counting calories, carbohydrates.

[00:33:38] **Dave:** Because you can never count the number of calories out, right?

[00:33:41] **Sal:** It's constantly adjusting.

[00:33:42] **Dave:** Okay. So calories out doesn't exist in, unless you're in a calorie box?

[00:33:46] **Sal:** That's a good way to put it. I always aim to get somebody's metabolism to be faster, to get them more insulin sensitive so they can eat more. Not because they need to eat more, but because they're surrounded by food.

[00:33:58] **Dave:** How do you measure their metabolism to know if it's faster?

[00:34:01] **Sal:** Without complicated equipment, the best way to do it is simply track and see if you're gaining or losing weight. It's not accurate, but it's about as good as you're going to get. And so you just track your calories.

[00:34:11] **Dave:** We will tell you your basal metabolic rate when you come into Upgrade Labs, but it's a 26,000-dollar medical device that's part of your intake. But again, it doesn't matter because you'll never know was it low or high? Well, was it cold outside today?

[00:34:26] **Sal:** Did you get good sleep? Did you get bad sleep? Were in a bad mood or a good mood, type of deal? But carbohydrates are not essential. So that's the macronutrient that I always encourage people to manipulate the most. You don't need them like you do with essential fats and proteins.

[00:34:43] Some people do better with more carbohydrates, other people do better with less. Generally speaking, though-- this isn't true for everybody-- when you're looking for strength in power, carbohydrates seem to be an ally. When you're looking for mental sharpness and

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cognitive performance, then you're better off with lower carbohydrates, generally speaking. But I've seen exceptions to both.

[00:35:04] **Dave:** I love that segmentation, and it works very well. I don't know a lot of people who are keto who are lifting at their very max for long periods of time. And in fact, I remember one of the guys who loves to copy my content, I was like, I'm going to run the Kona Marathon or Ultra Marathon and probably the Ironman in ketosis. I'm like, don't do it. It's going to ruin your labs. So he does that. And of course it ruin the labs. The fact you can do it doesn't mean it's at all good for you. So I wouldn't mind starting in ketosis and switching to carbs halfway through or something.

[00:35:43] **Sal:** That's actually a smart approach. Zach Bitter talks about he'll have some carbohydrates while he is racing, and he does ultra.

[00:35:50] **Dave:** That's what I've been advising guys to do. I don't do that kind of racing, but I know how metabolisms work.

[00:35:54] **Sal:** Yeah. I manipulate my diet based on what I'm looking for. If I'm going to do a round of podcasts, or I'm going to do a big product launch and I want to be sharp, I'll put myself in ketosis. If I'm going to go try and hit a new PR in the gym or do some workouts where I really want to perform really well, or get a good pump, or whatever, then I'm going to add some carbohydrates.

[00:36:12] **Dave:** How many carbs a day do you eat on average?

[00:36:16] **Sal:** Even when I add carbs are generally low. So at the highest I'll probably get to 200, at most 250. And then ketosis, I'll go as close to zero as I possibly can.

[00:36:24] **Dave:** Cool. Yeah. I've intermittent fasting and ketosis and MCT oil, and I'll use some of the liquid ketones, Ketone-IQ, on occasion. So I'm regularly in ketosis, but I don't seem to have a problem with carbs anymore. It used to be I touch carbs, I get fat, but once I fix my metabolism all the way, if I'm getting adequate protein, I'm carb proof. I don't get fat from like-- I can eat 400 calories of carbs.

[00:36:50] **Sal:** Well, your insulin sensitivity is probably a lot better than it used to be. There's an order of operation when you first start, people would label a fitness journey, and the first one is

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like, you got to really optimize, get your health, and then go after the muscle gain, and the aesthetics, and stuff like that.

[00:37:10] But even then, I tell people, if you pursue health, the aesthetics always follow. Aesthetics are a reflection of health. If you chase the look, a lot of people tend to sacrifice their health in pursuit of that, and they get in either one. So you did the right order.

[00:37:29] So it's like, I want to lose weight. Well, let me look and see how can I really just improve my overall health and not focus so much on what the mirror shows or anything like that. Let me try and optimize my health. Let me fix my gut health. Let me get my sleep in order. Let me eat in a way that just makes me feel good.

[00:37:44] Let me go to the gym and leave the gym feeling better than I did when I walked in. And that'll move you at least closer to the right direction than, I got to get this weight off right away, or I want to look a certain way. That tends to move people in the wrong direction.

[00:37:57] **Dave:** Mm-hmm. You can do crash weight loss things. I remember I had a post a while back. It was the rapid fat loss protocol, how to lose weight faster than you should. Because it's a guaranteed recipe for brain fog.

[00:38:12] **Sal:** Yeah.

[00:38:12] **Dave:** You lose all the fat really fast and then all the toxins in it go into your brain and you just feel like crap even if you're in ketosis. It's not worth it.

[00:38:19] **Sal:** No. What you don't want to do is teach your body to become resistant to famines with this repeated starving yourself, over exercise. So reverse diet is when you take somebody and you slowly increase calories, high protein, strength train, at an attempt to speed up their metabolism.

[00:38:40] Because then what happens is you get their metabolism. Here's the theory, and I've done it many times, and many strength coaches have done this. You get their metabolism to a certain point, and then you can cut their calories. They get leaner, and now they're at a higher calorie intake than they were when they first started, and they're lean. So it's easier place to maintain.

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[00:38:56] **Dave:** It's interesting, my daily basically calorie requirement was as high as 3,100 when I was eating about 4,000 calories a day to test out the Bulletproof Diet. And people are saying, you did not. I'm like, no, I did. Oftentimes more, and I was forcing myself to eat more than I wanted. Now it's around 2,200.

[00:39:17] And I don't eat as much as I did back then. And I think there's a longevity argument for eating less as long as you still have enough muscle mass. And we're still figuring that out. But it's very interesting. Eat more, increase your caloric burn?

[00:39:32] **Sal:** Yeah. this is a particular type of person. So this is a person that comes to me. Their body's just resistant to fat loss. They're tracking their calories. Let's say it's a guy, a 45-year-old male needs to lose 40 pounds. He's tracking his calories. He's eating 1,800 calories a day.

[00:39:51] He's not losing weight. He's doing cardio almost every single day. Okay, let's build up your metabolism because cutting from 1,800, you're going to end up 1,000. So we'll do that. We'll reverse diet, get them to a point where for them they feel good cutting from, and then let's get you to drop calories.

[00:40:07] But the point with that is the people that I've worked with who crash diet, gain it back, crash diet, gain it back, getting the metabolism to start to respond to the positive takes longer. And I think the body, I don't know if it's central nervous system, has a memory. It's like, hey, no. Mm-mm, we're too scared to burn more calories.

[00:40:24] We're going to remain as efficient as possible. So there's been times where I've worked with people where it's taken us a year of slowly getting their metabolism back in order before we could start the cut. Usually it's a three-month process for something like that.

[00:40:37] **Dave:** So interesting. So tell me why people need at least one gram of protein per pound of body weight.

[00:40:44] **Sal:** So the studies will show quite clearly that a high protein diet, regardless of the diet you're on, regardless of your goals, will give you better results. So whether you want to lose fat, you'll lose more body fat. If you want to build muscle, you'll build more muscle. If you want better insulin sensitivity, you'll get better insulin sensitivity by eating a high protein diet.

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[00:41:04] Now, high protein in the studies, there's an upper limit in the sense of any more than this doesn't seem to reap any more benefit. And the range in the studies is between 0.6 to 0.8 grams per pound of lean body mass. So I tell people, aim for a gram per pound of target body weight because you're probably going to cover the basis.

[00:41:28] Target body weight being where you want your body weight to be. Because if you're a hundred pounds overweight, obviously don't eat your current body weight. And that seems to be a nice general easy number for people to--

[00:41:38] **Dave:** So one gram per pound of body weight.

[00:41:40] **Sal:** Essentially. And if you hit that and you eat it first, if you look at the CGM data, eat your eat high protein breakfast, it affects your blood sugar positively for the rest of the day, or eat high protein meals.

[00:41:51] It's also very satiating, so you tend to eat less as a result. And even when calories are controlled, it results in more fat loss. So they've done studies like that where the calories are the same. One's high protein, one isn't. You get more fat loss.

[00:42:05] **Dave:** It seems obvious because 30% of protein gets consumed to burn the protein, 30% of the calories do.

[00:42:11] **Sal:** [Inaudible] effect. There could be the pro muscle building effect, or something like that.

[00:42:14] **Dave:** Yeah. It always makes me laugh when-- it doesn't matter how many calories are in the food. It matters how many calories your body gets from the food after it's digested. And they never control for that in the calories and calories out stuff, which is one of the reasons it's not, in my experience, very useful for people.

[00:42:29] **Sal:** Plus, the metabolism's so malleable. You could take somebody and just put them on exogenous hormones and you'll radically change their metabolism without them doing anything but getting these new signals in their body. So it can change from your stress level.

[00:42:47] **Dave:** Lack of sleep the night before.

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[00:42:48] **Sal:** Lack of sleep the night before.

[00:42:49] **Dave:** Makes the metabolism stressed.

[00:42:50] **Sal:** Yeah. And you'll notice that. You'll notice that you're colder. Your body doesn't want to generate as much heat. Energy changes. So the goal for me has always been, how can I-- only because, and you said eating more for longevity.

[00:43:03] You're right. If you look at longevity studies, eating less and doing better on less is better. However, here's what we're juggling. What we're juggling is the average person lives in a modern society. And when you look at studies on food, there's foods that are healthier, foods that are less healthy.

[00:43:22] But when you're burning more than you're taking in, a lot of that is actually gone. Now, you still get some negative effects, but you handle-- you'll see the studies where you'll get, and I hate these studies because they oversimplify things, but they'll be like, I ate simple sugars and whatever every single day, but I lost weight and my blood markers improved.

[00:43:42] Well, part of that's true. If you burn more calories than you take in, you actually take care of a lot of the negative effects. Not all of them, but some of them. So a faster metabolism in a modern society is for most people to benefit to be able to burn more calories because it allows them to eat more, which, unfortunately, it's hard not to eat more when you got DoorDash.

[00:44:07] **Dave:** Yeah, it does make it hard. I found that one gram per pound of body weight works really well for me. And in my longevity book, the lower limit of 0.6 grams, there's a cluster of longevity data around that. But everyone who does that, as far as I can tell, gets sarcopenia or muscle loss, which is bad for long- actually, it's bad for reaching a normal age, and it probably doesn't have that big of an effect on extending human lifespan. But you still need to have the muscle. So I think the 0.8 to 1 is the sweet spot from everything I've seen.

[00:44:46] **Sal:** That's what I've experienced in my career as well. And it is also quality of life, Dave, like, okay, so maybe I could squeeze out another five years, but I like to feel good while I'm living, and there's quality of life. And so there's also this mTOR argument that people will make, which I don't like because--

[00:45:06] **Dave:** It's nonsense.

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[00:45:06] **Sal:** It is nonsense because context matters. In a pro cancer environment, proteins and carbs are pro cancer.

[00:45:15] **Dave:** Well, not only that. And I've written a lot about mTOR. All the people who talk about, oh, animal protein raises mTOR, animal protein raises mTOR, the amino acids in animal protein do moderately raise mTOR. Guess what raises mTOR more than animal protein? Carbs. So you would have to be only eating fat and vegetable protein and no other carbs. And how would you ever get vegetable protein without carbs in nature? You can't even do it. So it's like a corner case of weird vegan fantasy.

[00:45:48] **Sal:** Well, here's what it reminds me of. Like I said, if you have cancer, then lots of things can feed the cancer. mTOR feeds cancer. It makes cancer grow more, but it doesn't cause cancer. It's a big difference. In a healthy environment, mTOR helps recovery, and repair, and muscle building. It's like the hormone testosterone. If you have a testosterone sensitive cancer, well, then we might not want to have high testosterone in that environment. But high testosterone in a healthy environment is anti-cancer.

[00:46:17] **Dave:** Yeah.

[00:46:17] **Sal:** So context matters.

[00:46:19] **Dave:** It does.

[00:46:19] **Sal:** So people take things down to the oversimplification and annoys the hell out of me when they do that because it's like, that's not how it works.

[00:46:27] **Dave:** Now, you mentioned upper limit for the amount of protein that a person can have. And we used to think between 30 and 50 grams per meal. That's the thing.

[00:46:37] **Sal:** Oh, I see where you're going.

[00:46:39] **Dave:** There's a new study that says 100 grams per day.

[00:46:43] **Sal:** No, your body will utilize it. The limiting factor is your digestion.

[00:46:46] **Dave:** Yeah.

[00:46:47] **Sal:** So yeah, I saw that study. Again, in context. So they're like, you can eat up to a 100 grams of protein. You can. However, a lot of people would eat a 100 grams of protein at one

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sitting, not feel very good. So I would always tell my clients, the high protein, your limit is what you feel okay eating.

[00:47:06] **Dave:** Mm.

[00:47:07] **Sal:** And when you go beyond don't that--

[00:47:08] **Dave:** So don't eat plant-based proteins because those always make you feel like crap?

[00:47:11] **Sal:** They tend to make people feel like crap.

[00:47:13] **Dave:** An anti-vegan argument you didn't even know you were making.

[00:47:16] **Sal:** Yeah, no, no.

[00:47:18] **Dave:** So here's my experience. I haven't talked about this on the show much at all. I like intermittent fasting. Slight problem, 200 grams of protein a day, two meals a day. The only way to do this is 100 grams per meal. So I thought about it, this was about two years ago. I said, you know what?

[00:47:39] That 50 gram limit sounds like a lot of bullshit. And if I'm wrong, I'm going to have bodybuilder farts because I'll have ammonia, and I won't be able to digest the protein. And then you'll smell it in your farts. So I'm going to do 100 grams per meal. I'm going to take digestive enzymes like I do anyway. And I did. It seems to work. I'm at six and a half percent body fat.

[00:48:03] **Sal:** The whole like eating 50 grams of protein is your upper limit came from the supplement industry because you make--

[00:48:10] **Dave:** Like a fitness scoop.

[00:48:11] **Sal:** 100%. No, you hit the nail on the head, Dave. That's exactly what it is. It's because you sell a protein powder with more than 50 grams, it loses palatability completely. In fact, peak palatability is around 35 grams, which is why you get that 35 to 50.

[00:48:24] **Dave:** Totally true. You know where the zone diet with 40-30-30 came from?

[00:48:28] **Sal:** No.

[00:48:29] **Dave:** That's the most fat you could fit into a bar before it becomes-- I'm serious.

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[00:48:33] **Sal:** That makes sense. Yeah. But evolutionarily, it makes no sense. You a hunter-gatherer's going to kill an animal, eat 50 grams of protein, be like, all right guys, we're done.

[00:48:42] **Dave:** Yeah, no way. So for me, one of my problems was I travel so damn much. You cannot get 200 grams of protein on the road unless you eat eggs. I'm allergic to eggs. So you're screwed because I'll order a steak. You need a one pound steak get a 100 grams. You're not going to do that except at a steakhouse. So last night, I ordered three. No, I ordered two sides of steak at some place and a whole bunch of oysters and some fish.

[00:49:09] And I usually eat two full main courses at dinner, and I would have to get in at lunch. I don't even eat that often on the road. So I just said, when I eat, I'm going to go all in. And at home, I do it, and that means I'm finally protein sufficient even when I'm traveling. And the difference is really noticeable.

[00:49:28] So for people listening, you got to get your protein in and, yes, one gram per pound. Fine, try 0.8. There's pretty good evidence it might work the same. It doesn't for me, but maybe it does for you.

[00:49:39] **Sal:** Yeah. For most people, though, and you're the exception-- you're pretty disciplined. Intermittent fasting and hitting protein targets like that can be really hard for people. Yeah. Especially for women. If they're like, oh, I'm going to eat one meal, and I'm like, well, got to eat 130 grams of protein. I don't think that's going to happen.

[00:49:55] **Dave:** Yeah. I could do it. I'm actually happy doing it, but I take a fistful of supplements, particularly enzymes. All right. Tell me why chicken is the best protein source you could ever have.

[00:50:07] **Sal:** I never said that either.

[00:50:11] **Dave:** I hate chicken, by the way. I'm anti chicken.

[00:50:13] **Sal:** Are you really?

[00:50:14] **Dave:** Oh, yeah. So tell me why you're anti-chicken, also why I'm anti chicken. Maybe we'll both learn something.

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[00:50:17] **Sal:** Yeah. I'm not anti chicken. I don't mind chicken. I like most animal source of protein. Beef is my favorite. Lamb would be a pretty close, second. I feel best on those. I would say chicken is maybe third, pork, probably four, just for me.

[00:50:32] **Dave:** You put chicken after pork.

[00:50:34] **Sal:** Just for me. Yeah, for me. So I notice a little bit of digestive issues if I eat too much pork, so I might have my own individual intolerance maybe.

[00:50:40] **Dave:** Most pork in the US is so polluted. You shouldn't eat it.

[00:50:43] **Sal:** I'm eating Heritage. It's not bad.

[00:50:44] **Dave:** Okay. It's good pork. It's different.

[00:50:45] **Sal:** Yeah, it's good. But yeah, chicken's there. Chicken breast is interesting. The whole industry was created by the anti-fat farce or whatever.

[00:50:55] **Dave:** It's like 1970s weird people. Run forever, eat soybeans and chicken breasts. It's just not natural. And brand muffins.

[00:51:03] **Sal:** No. Yeah. And chickens were bred to look like these crazy peck monsters as a result. Thighs, I'm all about chicken thighs. Way tastier, not even that much more calories. I don't know why anybody eats chicken breasts. Every client, I'm like, don't eat chicken breast. The only people that would eat chicken breasts were body builders that were counting every single calorie on macro, but doesn't make any sense.

[00:51:25] **Dave:** I did something really foreign to me. I'm dating someone, and I never really know what to cook for her because she's a wannabe vegan, but she actually eats a meaningful amount of animal protein and isn't planning to stop. She just likes the idea of it.

[00:51:42] **Sal:** She's dating you. That's weird.

[00:51:43] **Dave:** Yeah. Also, she eats steak around me all the time because it's what I cook for her. And I feel good about that, and we both feel good about it, but I'm like, I'm going to make you something that you want. You ate steak last night, and you don't eat steak every night, so I'm going to buy you some goddamn chicken. So I have not purchased chicken in 20 years.

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[00:52:03] I don't eat chicken. Why would you do that when you can get better protein? It doesn't taste very good. It's full of antibiotics. It's mean to the animals. The dust per calorie is higher. There's no reason to eat chicken than I can think of unless you're poor. And I say that not to make fun of you, if you're saying I can only afford chicken. I'm saying that in the history of food, peasants would have chickens as the entry level food that made eggs and affordable meat. And then there's a hierarchy of animals that become more nutritious and more expensive to raise.

[00:52:32] So just like oatmeal is peasant food, eggs and chickens are peasant food. They're the cheapest sources of protein and fat that can keep you alive. And then you move up from there to pigs, and then you get to goats, and then you get to sheep, and then you get to cows. And so it's a hierarchy of nutritional superiority.

[00:52:51] And so I don't do it, but I bought some chicken, and I was like, look, I did this for you. And she comes in, she looks at it, she goes, I only eat chicken once a year. It's really not very good. I'd rather eat steak. And part of me is like, goddammit, but the bigger part of me is like, yes. Got her into steak.

[00:53:09] **Sal:** Yeah. I don't mind chicken too much, but I do--

[00:53:13] **Dave:** You can have the chicken. It's still in my freezer.

[00:53:15] **Sal:** But I don't mind it, but beef is my favorite. I probably eat, I don't know, two and a half, three pounds of beef a day at least.

[00:53:19] **Dave:** Okay, so we're in alignment there. I probably do actually pretty close to that.

[00:53:23] **Sal:** Did you see the recent study that came out? It said 12% of Americans eat 50% of the beef in US.

[00:53:29] **Dave:** Yeah. They're the ones who are going to be alive 10 years from now compared to the rest of them.

[00:53:32] **Sal:** I think we're doing that ourselves.

[00:53:34] **Dave:** We are. And for any legislators or people like that, I don't know if any of them would bothers to listen to the show, if you have a problem with that, it's okay. Don't do it. You try

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to use whatever power you think you have to stop people from eating nutritional food, it will not end well for the country.

[00:53:50] And that's just how it is. And if you try to force me to eat bugs, and yes, I have eaten bugs before, and all of this other stuff, it will make me so profoundly ill that my life will have no meaning to me. And people who have no hope because they have no food are not the kind of people you want in your country.

[00:54:08] **Sal:** Well, unless that's the goal. I make the case.

[00:54:11] **Dave:** Even if it's the goal.

[00:54:12] **Sal:** Well, I make the case.

[00:54:13] **Dave:** It should come to Texas, man. That's not how it's going to be in there.

[00:54:15] **Sal:** No, I don't think so. But if you look at all the markets that exist out there, the incentives are to keep people not healthy, independent. And so convincing people to do things that are better for them would crush a lot of markets. So all the incentives are in the opposite direction. And we make the argument all the time on the show. It is unfortunate.

[00:54:36] **Dave:** It is really unfortunate. And if you make a law that says I have to be unhealthy, then I'm going to have to break the law. That's just how it works. And I don't think I'm alone in that.

[00:54:47] **Sal:** No.

[00:54:48] **Dave:** All right. So you're okay on chicken, but it's not as good as beef. All right. So we're in alignment on that stuff. All right. What's your favorite source of carb?

[00:54:57] **Sal:** Carbohydrates? Oh, easily digestible carbs are my favorite. If I'm going to go with a starch, it's either going to be a sweet potato or white rice for me. Buckwheat is actually not bad as well for me, but when I tell people to pick a carb, I always tell them to pick a carbohydrate that's easy to digest because carbohydrate sources tend to cause the most issues when it comes to things like gut inflammation.

[00:55:23] **Dave:** It's true. It's interesting. If you asked me 10 or even eight years ago, I would've said sweet potatoes for the win. And with white rice as a close second, where I am now, it's all

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about the white rice. The reason is oxalates. And sweet potatoes are relatively high in oxalates and buckwheat is shockingly high in oxalates. And I've gotten my levels down to a point now where I don't have pain in any of the old injuries or surgeries I've had. My movement is just crazy good.

[00:55:53] **Sal:** Is it the same when the buckwheat, like what they do with the rice, where they take off the hold?

[00:55:58] **Dave:** Yeah, the hold buckwheat. There's dark buckwheat and light buckwheat. Light buckwheat has less, but there's still a lot in buckwheat.

[00:56:07] **Sal:** White rice is the main one that I consume. It's easy to digest. I eat a lot of it if I want to. Doesn't bother me. Seems to work the best.

[00:56:14] **Dave:** For me, it's white rice, honey, and blueberries and a few other fruits are my primary sources of carbs. And cutting out sweet and white potatoes because of oxalates and just getting those levels lower, the difference has been really noticeable. I've been writing about oxalates for 10 years, but I wasn't militant enough. I'm like, well, let me cut out the major sources. But it turns out the middle sources are still enough if you eat the kind of volume that you and I eat because we're active people.

[00:56:40] **Sal:** It is interesting how reactive people have seemed to become to food though, isn't it?

[00:56:45] **Dave:** Yeah. It didn't used to be.

[00:56:46] **Sal:** When we grew up as kids, do you remember any kids with food allergies?

[00:56:51] **Dave:** It was a non-thing. I know I had them. When I discovered what dairy was doing to my brain, it was such a light switch.

[00:56:59] **Sal:** But you didn't get the allergy, like an anaphylactic shock.

[00:57:02] **Dave:** No, none of that.

[00:57:03] **Sal:** Now I've got kids, and there's whole tables that are peanut-free, dairy-free because of legit allergies. And I think there's allergies and then there's just intolerances, and

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they've all seem to have gone up considerably to the point where people are doing the ultimate elimination diet, going carnivore, and feeling so healthy.

[00:57:24] And it's like they're hyper reactive to so many foods. This is going to be more in your wheelhouse than mine, but there's something's going on, and I think it has to do a lot with the toxins.

[00:57:40] **Dave:** It's the toxins, and it may also have to do with some pharmaceutical interventions that a lot of kids are getting these days. And it's the combination of all those. It's the same thing with autism. And autism holds a place near and dear to me because I had Asperger's. I grew up on the spectrum. And you can fix your mitochondria, fix your biology, and then retrain your vision and your hearing and get rid of most of it.

[00:58:09] But there's still some things that linger. And having been through all the environmental and all the stuff that happens, you realize all these things have one thing in common. It's neurological inflammation. And that can come from toxins. It can come from a leaky gut, but we know it comes from the chemicals they're using, unquestionably.

[00:58:28] And so feeding your kids industrial stuff, giving them unnecessary medications for things that are not a clear and present danger to them could be bad for them. And even things like children's Tylenol, the number of studies showing the changes in kids' nervous systems from Tylenol, don't give your kids Tylenol unless they're about to die.

[00:58:50] **Sal:** We just talked about that on the show, that we still don't even know how Tylenol works.

[00:58:54] **Dave:** It's crazy.

[00:58:55] **Sal:** Did you see the study on risk taking behavior in Tylenol?

[00:58:58] **Dave:** Yes. Totally crazy.

[00:59:00] **Sal:** Yeah, it changes your risk aversion. What does Tylenol have to do with that?

[00:59:05] **Dave:** There's so much we don't even understand about how we process reality. It's a little scary because AI will probably figure it out. But if I was an AI, I probably wouldn't tell us because we would only do bad things with it.

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[00:59:20] **Sal:** It's a good natural painkiller, white willow bark.

[00:59:23] **Dave:** Yeah, it's basically aspirin before they can factory it, right?

[00:59:25] **Sal:** That's right. That's right. Yeah. I used that for years.

[00:59:30] **Dave:** What's the one supplement that you would never stop taking?

[00:59:34] **Sal:** Oh gosh. Okay, so here's the hierarchy. Supplement for deficiencies. If you can't meet a deficiency with food, a nutrient deficiency, essential nutrient, that's going to be always at the top. Below that, creatine. Creatine is one of the best all-around longevity, health strength, insulin sensitizing, mitochondrial health supplements that you'll take. And you're going to start to see everybody start to take creatine because of its benefit. Good for the liver. It's good for the heart.

[01:00:05] **Dave:** It's a mitochondrial enhancer there. There's a lot of reasons to take it. And God, I've been on and off of creatine since I was 16. Have you seen the studies on hair loss and creatine?

[01:00:15] **Sal:** So there seems to be a higher rate of DHT, but they haven't really connected it to hair loss. Now, DHT is not necessarily bad. People freak out over DHT. People need to look at the research on these DHT blocking drugs and some of the effects that they have on people where people are taking finasteride steroid. DHT, you need.

[01:00:38] So a little rise in it because of creatine, which again, it hasn't been really established anyway, probably-- considering all the other studies done on creatine, doesn't seem to have a negative effect. Seems to be, across the board, good.

[01:00:53] **Dave:** It seems like it's really important. I've also seen maximum you can absorb is about five grams a day. Right?

[01:00:59] **Sal:** There's some new studies that are showing that you may get some cognitive benefits when you're taking up to 10. Now, the problem with that is this. I don't know if that would benefit someone like you or I who eats so much meat and are getting so much natural creatine. And I got to look at the studies again. I haven't looked at them in a while. If these are everyday people or if they're people who are already consuming lots of creatine in natural forms.

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[01:01:21] **Dave:** That's a good question. That was my next question. If you get two and a half pounds of red meat a day like you do, you're getting more than five grams anyway. So then do you need to supplement? I supplement as well just because I might as well-- I'm taking probably an extra five, maybe two and a half. I don't remember what's in little packets I use.

[01:01:37] **Sal:** I take close to 10 a day, and I have for years. Been doing it since I was a kid.

[01:01:45] **Dave:** Seems to work?

[01:01:45] **Sal:** Yeah.

[01:01:46] **Dave:** All right. And what is the single biggest fitness mistake people make?

[01:01:52] **Sal:** Oh boy. Single biggest fitness mistake, they don't start where they're at. They go from not exercising to, I'm going to go five days a week, or I don't do anything with my diet to, I'm going to completely overhaul my entire diet. They put themselves on a path of unsustainability.

[01:02:13] If you look at the data on just weight loss, the vast majority, I think 90% of people who lose weight gain their back, the weight loss isn't the challenge, it's the, can I keep it off? So go in with sustainability in mind. How can I do this in a way that's sustainable? And a lot of it has to do with how you develop discipline and behaviors and relationships with the things that you're doing.

[01:02:34] So the biggest mistake people do is they start working out in a motivated state of mind, which is not permanent. And when you're motivated, you're going to overestimate your ability, you're going to overestimate your ability to maintain consistency, and you just do too much.

[01:02:50] So start like this, ask yourself this question, what is something I can do today that I can maintain for the rest of my life, that I can maintain even when I lose motivation? Put yourself in that state of mind. There is no wrong answer. That's where you start. When it becomes a habit, when it feels like it's something that you enjoy, and this is what I want, like I like doing, ask yourself again.

[01:03:09] And what you'll find over time is the time in between questions becomes shorter and the steps become larger, and you get this kind of snowball effect. But that's the biggest mistake. I

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managed gyms for years and I saw it happen all the time. People will come in and just overdo it right out the gates, and we'd lose them three months later.

[01:03:28] **Dave:** Beautiful. Well, Sal, thanks for being on the Human Upgrade. Guys, you should check out Mind Pump School podcast. They do five days a week. I think these guys have nothing to do with their lives. I have no idea. Two a week for 10 years has been enough for me. How do you do that?

[01:03:44] **Sal:** Oh, we have fun. I got my co-host, and we have a lot of fun conversing. We don't just communicate information. There's a lot of entertainment in there as well and fun stuff. And we learned that as coaches and trainers, if you are fun to be around, you'll be more successful as a trainer and get people better results than if you're just information. So you'll get both. It's entertainment and health and fitness.

[01:04:06] **Dave:** Nice.

[01:04:07] **Sal:** Thank you.