EP\_1229\_PAUL\_SALADINO\_(AUDIO)

[00:00:00] Calorie restriction fails 70 to 85 percent of the time for people. I wouldn't be surprised if there [00:00:05] has been some funding behind this calories idea to confuse people. Every time I had quinoa, I would [00:00:10] see it in my poop the next day. There's no nutrition that I got from that. Quinoa's garbage. I ate so much oatmeal in [00:00:15] college that I stress fractured my femur.

Every single bowl of oatmeal that you are eating is robbing you [00:00:20] of minerals. You need to supplement minerals first and I recommend taking organs. So I brought you [00:00:25] my favorite supplement that we make, testicle, liver, and blood.[00:00:30]

You're listening to the. Human upgrade with Dave Asprey.[00:00:35]

Today is an in person interview. [00:00:40] My favorite kind here at the studios in Austin, Texas, with none other [00:00:45] than Paul Saladino. And Paul, if you don't follow him on social media, [00:00:50] is a well known physician talking about what happens when you eat [00:00:55] meat, I would say that you're a leader in the carnivore space.

You're a guy I [00:01:00] really respect because you're willing to evolve. Thank you. And so many [00:01:05] people get stuck on an idea, and then they just do it, and do it, and do it. [00:01:10] And you can actually make the most money that way, online. If you just build a cult, and then you say, [00:01:15] I'm Keto, I'm Keto, I'm Keto. Even though Keto breaks people.

Like the reason I wrote the Bulletproof Diet was [00:01:20] because the Keto diet helped me lose 50 pounds, the other 50 pounds I had to not do Keto and go in and out and all this. [00:01:25] Right. So you're, well, I'm carnivore except I eat fruit. So [00:01:30] I just have to ask you this. Why did you choose weakness? Why did I choose weakness to change my mind?[00:01:35]

You went from all you need is meat and salt. Yes. And organs. [00:01:40] Yeah. To something else. To something else. Why? Because I ran into problems. Maybe kind of like [00:01:45] you. Yeah. What? Okay, what problems happen when people only eat meat and salt and [00:01:50] organs? I ran into what I think was a lot of electrolyte insufficiency.

So, it turns [00:01:55] out that for me, eliminating vegetables from my diet was very instructive in terms of [00:02:00] some foods in the vegetable kingdom, the plant kingdom, that might be triggering my eczema [00:02:05] specifically. We can talk about what I think are triggers for me, might be triggers for other people. Often foods that we think [00:02:10] of as healthy sometimes don't work for everyone, but a lot of people can eat them.

And I benefited a [00:02:15] lot from doing strictly meat, organs, and salt, and fat for about a year and a half. I wrote a book about it because my [00:02:20] eczema was really bad. It got way better. And then, you know, toward the end of that time, I was [00:02:25] experiencing some pretty significant electrolyte insufficiency. manifested with like heart [00:02:30] palpitations, especially when I was sleeping.

My testosterone at the beginning of the carnivore experiment [00:02:35] was about 800 total. And after about a year, a year and a half, it's down to 500. [00:02:40] Sex hormone binding globulin goes up to around 120. Free T3, [00:02:45] free T4 go down, but TSH doesn't change, and I start getting kind of cold [00:02:50] sometimes, and I notice I notice muscle cramps when I'm surfing, or muscle [00:02:55] cramps when I'm climbing.

So a lot of things kind of pointed in the direction of overall electrolyte [00:03:00] imbalance, and I didn't remember this from medical school, I didn't learn it, but it turns out that insulin has [00:03:05] benefits in the human body. What? Just because high insulin is bad? It doesn't [00:03:10] mean low insulin is better. In fact, which is more dangerous?

I mean, probably low insulin is pretty [00:03:15] dangerous, yeah. Yeah, low insulin and low cortisol are both more deadly than high [00:03:20] insulin and high cortisol. Yeah, I mean, low cortisol, this is Addison's disease, right? This is John F. Kennedy in a lot of [00:03:25] ways. The thing about eating no carbohydrates is your insulin goes down a lot, [00:03:30] but you don't even get the postprandial, the after meal insulin bumps, which are [00:03:35] so beneficial for your body, I would argue they signal abundance to your body, and they [00:03:40] do give it.

a required signal to the kidneys to hold on to sodium, chloride, [00:03:45] potassium, calcium, probably magnesium. We need that little, we need that [00:03:50] input. I think it's okay to have your insulin go up after meals, and that's what I was missing. So then I [00:03:55] thought from this carnivore perspective, okay, I've learned that I believe there are some plant [00:04:00] toxins that affect us as humans.

Maybe differentially between different humans. But what are [00:04:05] the carbohydrate containing foods that I can reincorporate that will have the least amount of these plant [00:04:10] toxins? I've started with honey, and then progressed to fruit, and that's kind of where I am now. I'm [00:04:15] just kind of laughing. Chapter one of the Bulletproof Diet.

I'm like, guys, there's five things that might be [00:04:20] messing with you that come from plants. Lectins, phytic acid [00:04:25] Oxalates let's see what mold toxins, what's your major thing, and histamine, and [00:04:30] a sixth one that was in the book was seed oils. And that you're probably getting [00:04:35] cravings and health problems because one or more of these are kryptonite for you that may not [00:04:40] be kryptonite for another.

And this was before, you know, Plant Paradox came out. Right. I feel like [00:04:45] oxalates are trending right now. I've, I mean, when I went on Joe Rogan, I'm like, you're getting too much oxalate [00:04:50] in your spinach and kale smoothies. Yes. Yeah. Yeah. And it turns out, you get five [00:04:55] times the dose that your body can eliminate in one spinach kale smoothie.

I'll take a [00:05:00] huge amount. And it's 20 percent of the beginning fatal dose. So, maybe, [00:05:05] you might want to cook it and dump the water at least? And I remember Joe's going, no! And seven years later when [00:05:10] Mike Tyson's on and Mike is talking about killer kale. Joe's like, yeah, I had to quit the kale smoothies [00:05:15] because of oxalates.

And so, it doesn't mean that no one should ever eat spinach, although I would [00:05:20] argue there's no reason to eat spinach unless you're starving. Yeah. But, it does mean that being aware that if [00:05:25] you're doing something that no one ever did, which was eat like two pounds of spinach every day, [00:05:30] that, just understand Popeye, He wasn't actually eating spinach.

He was [00:05:35] injecting steroids. That's what his spinach, he was popping the spinach. [00:05:40] So this was what they did in the sixties and cartoons. So I just, I, I've been on a very similar [00:05:45] path as you and I, I do eat carbs. I recommend cyclical ketosis [00:05:50] because one thing that also probably happened to you happened to me when I did the all meat.

I experimented [00:05:55] meat and eggs and coffee for, I did 4, 500 calories a day [00:06:00] for almost a year. And I was trying to prove, look, I'm going to get fat less than I should, but I actually [00:06:05] lost weight on it. Which, the whole calorie thing is nonsense. It is. But what I did get was [00:06:10] interruptions in my sleep, like 12 times a night.

You got that as well, right? I had some pretty serious [00:06:15] sleep interruptions. Yeah, this can happen. And then the gut bacteria, acromantia, which [00:06:20] are probably really good for you, they control your blood sugar, if you have mucus [00:06:25] in your gut. If you don't, they eat your gut. So I got leaky gut, I gave myself an egg allergy.

When I [00:06:30] was doing that kind of thing, and that's why I'm like, well, you go into ketosis to get the benefits, go out of [00:06:35] ketosis so you don't get insulin resistant. And to this day, a lot of people go, in [00:06:40] fact, someone was at a thing where I was speaking for one of my books and like, oh yeah, Dave invented the keto diet.

I'm like, no, that [00:06:45] was Robert Atkins. And I didn't invent it. And I'm not even a keto guy. I'm just, keto is a [00:06:50] tool that you can use. And you can go into ketosis in the morning with MZT oil and be out of ketosis at lunch if [00:06:55] you want to. So what's your take on keto now that you've been down this journey? So, [00:07:00] I think that pretty clearly for me and a lot of other people, like yourself, long term ketosis has a lot of [00:07:05] potential baggage to go with it.

Electrolyte insufficiency, hormonal imbalance, sleep issues. [00:07:10] ketones are fuel. Our body clearly has a pathway to make them, which I [00:07:15] see as kind of a backup pathway. I think there's a lot of therapeutic benefit to for ketosis for [00:07:20] people that have broken mitochondria and need to circumvent a purely glycolytic pathway in their [00:07:25] biochemistry.

And, you know, I think that a lot of people are leaning on keto [00:07:30] still for fat loss and ending up in sort of a hole. They're ending up in kind of a rut and they [00:07:35] can't get out of it because they've, they, they end up with this carbohydrate [00:07:40] fear. And I think this is being perpetuated by some people in the space right now.

Sure. Who are saying that [00:07:45] things like honey are harmful for humans. I mean, I saw a recent podcast thumbnail on youtube [00:07:50] and that the title was honey is a lie or what they told you about honey was a lie. And I thought, okay, I [00:07:55] disagree with that. But you know, this idea that like all carbohydrates are horrible for you and Any [00:08:00] spike in your blood sugar is bad.

Look, I love continuous glucose monitors. I think they can be a [00:08:05] very useful tool for looking at glycemic variability and a visual representation of [00:08:10] insulin sensitivity. And I think they create a lot of carbohydrate fearing and people create this [00:08:15] arbitrary glucose ceiling that they must not breach for fear of [00:08:20] creating insulin resistance or for fear of creating arterial damage or inflammation that happens when your blood [00:08:25] sugar goes up 140 milligrams per deciliter, which is just nonsense.

What I look at, and [00:08:30] I'm a huge fan of CGM. In fact, I was an early seed investor [00:08:35] and advisor in levels. And so I, in fact, I just took my, my Dexcom sensor off. I [00:08:40] think there's a mark on my arm from it because I don't have my new one yet. And I look at how long does it take [00:08:45] my body to return to baseline?

Yeah. Alright, so if, if I get a spike, [00:08:50] and I had a bunch of rice and some honey, and then I come back down to normal within two [00:08:55] hours, that's normal. Pretty insulin sensitive. Yeah. And if I stay high [00:09:00] for three days, then I might have an issue. Right. And so this [00:09:05] middle ground is so important. I remember years ago, a guy named Jimmy Moore, he was [00:09:10] a devout low carb guy invited me to speak at a low carb cruise.

[00:09:15] And this is very, very early in the days of Bulletproof. So I went [00:09:20] and I'm expecting a 300 relatively fit people. This was one of the most morbidly obese groups [00:09:25] of people I've ever spoken to. And. I remember asking one guy, I'm like, well, you're talking [00:09:30] about this low carb thing, but you still have a lot of weight.

He goes, oh, I'm only 300 pounds. I used to be [00:09:35] 450 pounds. I know my problem is that some days I go over 15 grams of carbs. If I [00:09:40] could just get under 10. Meanwhile, he's pouring NutraSweet on his food, and [00:09:45] they're eating seed oils. Anything that's not a carb is considered food. Right. It doesn't [00:09:50] work. It doesn't.

I've seen a lot of people lose weight on keto. And some people get [00:09:55] to exactly where they want to be in terms of weight on keto, but a lot of people get to a place where they kind of plateau [00:10:00] with weight to lose and they end up in this ideologic kind of quicksand and they can't, [00:10:05] they can't do anything that's going to spike their blood sugar.

And as you hinted at earlier, they've also become so [00:10:10] physiologically insulin resistant. This is not necessarily the same physiology as pathological [00:10:15] insulin resistance and diabetes or this insulin resistant spectrum that is synonymous with metabolic [00:10:20] dysfunction, but they've become so physiologically insulin resistant that if they eat a handful of [00:10:25] blueberries, their blood sugar spikes, quote unquote, and they feel badly because they haven't [00:10:30] basically, they've put all of their metabolic machinery for processing carbohydrates into the attic with the [00:10:35] Christmas decorations, and it takes a little while to unpack it, and they just end up in this ideological dead [00:10:40] end.

And that's, I think that's, that's, Tragic for people because I wanted them to understand there are [00:10:45] other ways to get to your fully healthy state. My advice has always been if you're in [00:10:50] ketosis have pancakes gluten free on Saturday. Just so you go out and [00:10:55] you come back in so your body remembers and people forget the glial cells in the [00:11:00] brain.

These are the things that take care of you. care of your neurons and they [00:11:05] require glucose, but your neurons love ketones. So it's, why wouldn't you [00:11:10] just have a gentle wave back and forth? Almost like you're on the savannah and you find a [00:11:15] beehive and you eat the whole thing and probably including the bees.

The larvae are very good. Have you, [00:11:20] have you done that? Have you eaten the larva? I have not eaten the larva. Although I would I've eaten [00:11:25] a lot of weird foods, but not that. When I was in Tanzania, I had a A honeycomb with the Hadza, [00:11:30] they literally, we were hunting a baboon and they find this beehive in the tree and [00:11:35] they smoke them out.

They make a fire in two minutes. They smoke out the bees and they're handing me a honeycomb and there's bee [00:11:40] larva and not even a millisecond that I questioned whether I was going to eat this. I was when in [00:11:45] Tanzania you eat, you eat what the hunter gatherers are handing you. Yeah, it's pretty incredible.

I've eaten termites [00:11:50] live out of the hive in Belize. You just put a stick in there and then you just eat it. What's that like? [00:11:55] It tastes like pine nuts. Okay, that's pretty good. Yeah. I could get behind that more than I like pine nuts. [00:12:00] Right. So, I, I don't, I don't have a problem with any food that's out [00:12:05] there, especially people who have been eating it for a long time.

I just like to know what are the pros [00:12:10] and what are the cons. And we have this weird blindness, I love this [00:12:15] at a guy who's trying to lose weight because, well, I'm eating four bananas a day because potassium [00:12:20] and you're going, well, that might be a lot of sugar you're getting in there. What if you just took a [00:12:25] potassium pill, right?

Or drink water with potassium electrolytes. So [00:12:30] it's to the point now where this aggregate nutrient density index, you know about [00:12:35] this? So this is something that the vegans propose and they're saying, well, let's [00:12:40] ignore bulk. Right. They're saying how many nutrients are there for very [00:12:45] low calories? And this is what gives you an excuse to eat like a bag of kale because there's no [00:12:50] calories in it.

It's mostly just pain and fiber and a few vitamins [00:12:55] ignoring toxins entirely. Exactly. And this is dumb because that way of thinking would say what [00:13:00] has the highest aggregate nutrient density index? Multivitamins, but [00:13:05] they would take multivitamins along with a side of arsenic and cyanide because those are invisible in that way of [00:13:10] looking so I don't look at nutrient density at all.

I actually want calories in my food. That's what fuels my [00:13:15] energy right? Why are we fearing calories? I think that the calories idea [00:13:20] is kind of a psyop. I wouldn't be surprised if there has been some big food quote [00:13:25] funding behind this calories idea to confuse people because this idea that you can [00:13:30] just Limit your calories without improving food quality is insidious.

This is where [00:13:35] Weight Watchers comes from, and I'm, I'm eating based on points or something, you know? And [00:13:40] it's the idea, which I think this is the, this age old kind of silly debate that we [00:13:45] go round and round with people about on, online in nutrition circles about calories in, calories out. [00:13:50] And you think, of course, yes, if you eat Twinkies in a calorie deficit, you will lose weight.[00:13:55]

Is that the best way to lose weight? Not necessarily. I would like to think that was true, but it's not always true. [00:14:00] Well, there will be adaptive thermogenesis and eventually you'll stop losing weight unless your thyroid's at zero. Yeah. Unless [00:14:05] you have zero, uh, ol in your food. Do you know about that? Oh, yes, yes.

This, this [00:14:10] mold toxin that creates, well, they sell the mold toxin to. Cow breeders [00:14:15] so that the cows get fat on 30 percent less calories. Yes. So for me, I actually lived in a house that has zero and all. I [00:14:20] didn't know it. 10, 000 times more estrogenic. So I'm like, I was starving all the time and I'm [00:14:25] working out 90 minutes a day.

My thyroid is almost undetectable. My testosterone is lower than my mom's. [00:14:30] In lab tests, right? And I can't lose weight on a low calorie diet, even though, [00:14:35] well, it's because of food quality and my environment. Yeah, you know, it's funny. I did a [00:14:40] podcast this morning with Dale Brisby. He's a cowboy here. I think he has that show on Netflix, like how to [00:14:45] be a cowboy.

And we were talking about how to raise cattle, and he was telling me about this. He said, you [00:14:50] know, when I'm raising cattle as a cattle rancher, we give them something. He didn't know. It's a [00:14:55] little wax pill they put in the cow's ear. He didn't know that it was the xeronal. And I'd heard you talk about it, so [00:15:00] I mentioned it to him.

And he said, yeah, we give this to them, and we can feed them less feed, and they get fatter. [00:15:05] And I thought, okay, Dale, but you understand what's going on there, right? This is actually kind of a [00:15:10] beautiful insidious black mirror of what's happening to humans [00:15:15] today because I think that there are similar toxins that act in similar ways in our food [00:15:20] environment in our ultra processed foods that are breaking our metabolism.

And so I've, [00:15:25] I've thought that this, you know, when you see a calorie label, it's so misleading. Because say you see Doritos and [00:15:30] it says one serving is 200 calories. I think about that as potential energy. That's [00:15:35] potential energy. But you have to make that into physical kinetic energy in your body to [00:15:40] repair DNA, to make hormones, to do all of these cellular processes.

And that, [00:15:45] Transition from potential energy to kinetic energy is not assured, especially if you have a broken [00:15:50] metabolism by all of the toxins in our environment, whether it's sea oils accumulating in your membranes, [00:15:55] causing excess oxidation or the cardiolipin in your mitochondrial cristae to be to be misfolded [00:16:00] or, you know, all of these mold toxins that are affecting hormones.

If the transition, if the [00:16:05] actual You know, movement of energy from potential energy in food to kinetic energy in your [00:16:10] body is impaired. You will simply store more of those calories. So this idea that you can just [00:16:15] limit calories and lose weight is completely misguided. It's so false, [00:16:20] but it really is convenient for manufacturers of Coca Cola and Doritos and [00:16:25] Frito Lay who can say, just eat less.

It's funny because if you [00:16:30] tell people to eat less calories, they get cravings. Of course. And then they buy Doritos. It's [00:16:35] so smart. There's another thing I'd like to share. Every now and then you'll see like a [00:16:40] 25 year old fitness instructor, influencer who's saying, well, I just had a Diet Coke to [00:16:45] cancel out my Snickers bar and none of this stuff matters.

If you just eat less calories, you'll lose weight. [00:16:50] I go, okay, this is great. Uranium has a million calories per [00:16:55] gram. So if you ate that, you'd get fat, right? And they go, well, you can't absorb it. I go, oh, so we're asking [00:17:00] about absorption now. So you just change the rules. Okay. And what about zero and all? If you can get fat on 30 [00:17:05] percent less calories, it's probably not the calories, right?

And then they just look at me angry and then maybe they have to read a [00:17:10] book or something. Well, and as you hinted at, if you restrict your calories, you [00:17:15] also end up in this kind of, this, you're digging yourself in a hole. Yeah. It's a race to the bottom. [00:17:20] We know we get adaptive thermogenesis as humans. Your thyroid hormones are less [00:17:25] powerful, or they are either downregulated at the level of conversion from T4 to T3, or [00:17:30] T4 goes to reverse T3, or downregulated at the level of the receptors.

And [00:17:35] basically your whole body thermostat gets turned down. So when you restrict calories, you can see the research. [00:17:40] Calorie restriction fails 70 to 85 percent of the time for people. They just don't do it. Don't keep the weight off. [00:17:45] So why are we even suggesting this to people anymore? It's voodoo science.[00:17:50]

I look at telling someone to restrict calories as the same as when a doctor would [00:17:55] say, smoke Marlboros, they're the best. It's, it's just not [00:18:00] real. It doesn't work. And there's no conversation or there's less of a conversation that I would hope for [00:18:05] around food quality, because I think then we have to have the hard conversations.

What is quality food? [00:18:10] Is meat quality food? You and I believe it is, but then we have to have candid [00:18:15] conversations with people who don't believe that, you know? What is quality food? I think most of us understand broadly what [00:18:20] quality food is. I don't. I would say any food that our grandmother recognized is a step in the [00:18:25] right direction.

I would say that, but we live in a bubble of being abundantly healthy. If you go to a [00:18:30] stock photo site and you say, show me healthy food, they're going to show you a salad [00:18:35] with 40 calories in it and some sort of unhealthy looking person eating it, [00:18:40] smiling as if they like the salad, or a little piece of lean chicken.

When we see healthy [00:18:45] food, Healthy food is what the dieter's plate from 1950 looked like, which was a scoop of full fat cottage [00:18:50] cheese, two beef patties, a piece of lettuce and a piece of tomato. I would argue about the tomato. [00:18:55] And maybe you're sensitive to dairy or not, but people ate that to lose weight and it worked.

Yeah. [00:19:00] And now the dieter's plate is kale and quinoa. Tell me why quinoa [00:19:05] sucks. Have you ever been camping? You know, when you're backpacking? Mm hmm. So I thru hiked the Pacific [00:19:10] Crest Trail. I went from Mexico to Canada. Sweet, that's amazing. Yeah, it's 2, 700 miles. And one of the things we brought [00:19:15] on that trail was quinoa.

You poor thing. And every time that we had quinoa, so I'm [00:19:20] backpacking for three and a half months, Every time I had quinoa with my buddy, I would see it in my poop the next [00:19:25] day. Yep. So, number one, your body is really not gonna have an easy time [00:19:30] digesting quinoa. You'll see it in your poop. I mean, it's just a science experiment, guys.

But when you're [00:19:35] camping, you see your poop, you know, you don't flush it where you see it. It's just how it works. You see it in your poop, and I'm thinking, okay, that's, there's no [00:19:40] nutrition that I got from that. The other big problem with quinoa, from my perspective, is the saponins, [00:19:45] which are not really degraded when you cook it.

Oats have kind of the same problem. These [00:19:50] and these are soapy substances. That word means soap to prevent [00:19:55] digestion. Aren't your cell membranes made of fat? When you put soap on fat, what's going to happen? It dissolves [00:20:00] it and it's like, you know, it decreases the tension between these things. So the quinoa, [00:20:05] so many of these plant foods, and this is again, part of the carnivore journey for me personally, [00:20:10] your Bulletproof journey mirrored this.

So many of these plant foods are clearly communicating to us, [00:20:15] Don't eat me. Stop eating me. Yeah. And we're just, we're being [00:20:20] told that these foods are so healthy for us, or like you're saying, that they are the top, they are the [00:20:25] pinnacle of health, these are the healthy foods according to AI. Quinoa is really hard to digest, and it's full of these [00:20:30] defense chemicals that are not degraded much with cooking, that are probably irritating your gut.

[00:20:35] Quinoa's garbage. If you go to a restaurant and they put quinoa in your salad, there's a hundred percent [00:20:40] chance that that was not pressure cooked. The only safe way to eat quinoa is the way that they would in [00:20:45] Peru, and I've been there. They ferment it for several days to make it digestible at all. It is [00:20:50] peasant food.

It's better than starving to death. Yes. And you could also pressure cook it here. [00:20:55] But when you throw a handful of it in water and boil it, you are just trashing your gut. [00:21:00] I remember years ago, David Wolf. You know, David Avocado Wolf. Oh, he got me into being vegan. He was the [00:21:05] reason that I was a raw vegan 14 years ago.

So you and I were both raw vegans. Years and years [00:21:10] ago, right? After I started Bulletproof, he invited me to speak at his conference. Which is kind of funny, because [00:21:15] I'm, you know, Mr. Grass Fed Beef and Butter. But it was because he wanted to launch a mold free coffee. Unfortunately, it [00:21:20] didn't taste very good.

But, so I, I went there. And I said, guys, I'm a lacto, ovo, [00:21:25] bifo, porco vegetarian, and I hope we can be friends. And I gave a [00:21:30] talk about how the values of regenerative agriculture line up with what [00:21:35] vegans are going for. They're going for health. It's a mistake. They're going for animal cruelty. It's a [00:21:40] mistake.

And they're going for the environment. It's a mistake. It's well intentioned. So, I went through the talk, [00:21:45] and I said, so here's my ask for you. I want you to add ghee to your vegetables, because you'll absorb them better. [00:21:50] And I came back the next year, and two thirds of the raw vegans in the room are no longer vegan, because they were eating ghee, and [00:21:55] David started selling ghee.

Because it worked. Of course it worked. Because we need it. Of [00:22:00] course. I mean, we need it. We should talk about oats, too. Okay, before we get into oats, I gotta tell you the punchline for the [00:22:05] David Wolf thing. I just thought, well, why did I start talking about that? I talked to the hotel [00:22:10] where they hold this event, And I said, you guys must hate this event because no one will order room service because they wouldn't eat [00:22:15] any of this.

And the guy just started laughing. He goes, no. This is our highest revenue [00:22:20] of the entire year for room service. So what was happened was I went to the VIP dinner [00:22:25] and I ate some quinoa and river eltsin. I spent an hour in the bathroom afterwards. I was like, why do I feel like crap? [00:22:30] And of course, you know, I ordered my own food.

Everyone else at the hotel would come down, eat the peasant food, and then [00:22:35] go upstairs and order the fried steak. Get, get a steak on the, on the sly. Yeah, exactly. This is what [00:22:40] I wonder about. Like how many closet meat eaters are among the [00:22:45] vegans? Yeah. You've interviewed, oh geez, I'm blanking on her name right now.

Elise Parker? No, the [00:22:50] daughter of the PETA. Michaela Peterson? Not Michaela. That's Jordan Peterson's daughter. I was just on her show. Her name's [00:22:55] Monica Hershaft. I don't know her. And her father was a founder of PETA, and she tells this [00:23:00] story. She almost died from it. A vegan diet. She had a sneak meat and he [00:23:05] had liberated a concentration gambit was deeply traumatized by what he saw, and he [00:23:10] came back to the US and he saw a slaughterhouse and it triggered him and the whole [00:23:15] PETA movement was about trauma Fair.

Yeah. It was all about trauma. But she [00:23:20] almost died and now she's a devout carnivore. Yeah. I mean, there's a lot of. Yeah, I get it. Like, I [00:23:25] understand why people sometimes choose to avoid meat. And [00:23:30] I think that for us as homo sapiens, that's a bad idea nutritionally. It harms us. [00:23:35] It does. There is a way, from my shamanic training and things like that, I [00:23:40] fundamentally believe and have experienced.

We made a, we'll call it a spiritual [00:23:45] contract with our farming and our food animals. We nourish them, they nourish us, and they [00:23:50] come here for gratitude. Like, that's the animal experience that they were seeking. So, this is why you say [00:23:55] thank you before you eat the juicy ribeye. And then, it, it's spiritually complete as [00:24:00] long as the animal is treated well.

And, as long as the animal poop went back into the soil, like, [00:24:05] we completed the cycle of life in a really sacred way. Yeah. And, just recognizing that, [00:24:10] as a regenerative farmer, when I built my farm, and we raised and ate our sheep, and our pigs, and our [00:24:15] cows, And it gets deep, but it's not unclean. I [00:24:20] agree with you.

Have you ever read Tom Brown's books? The, the guy who wrote The Tracker? Yeah, he's a [00:24:25] legendary. I've always wanted to do his course. I love it. His son is doing it now too, these survival courses. But I [00:24:30] read his first book, The Tracker, and then many of his subsequent books. And the scene that sticks with me from [00:24:35] this is the first time he kills a deer.

He's nine or 10 years old. He's apprenticed to this Apache Indian in the Pine [00:24:40] Barrens of New Jersey, 1960s. He's a young child and there's this. You know, Apache [00:24:45] Indian grandfather, he calls him, he's learned how to stalk and kill this deer. He's [00:24:50] followed this lame deer around and he's in a tree. He falls down in the tree with, he falls out of the tree with a [00:24:55] knife and stabs the deer.

He brings the deer back to camp. He's weeping. And this man, grandfather, this [00:25:00] Apache Indian says, why are you crying? And I'm paraphrasing. He says, Oh, I'm so sad that I killed this deer. And he says, [00:25:05] once you understand that the life in the deer is the same as the life in a blade of grass, and that in order for something to live, [00:25:10] something else must die, this is the way of life.

This will all be easier for you. And I thought, that's [00:25:15] very profound. Veganism is a complete fallacy. There is no [00:25:20] life on this earth without killing something. All of the by kills, right? Everything that vegans [00:25:25] Like you said earlier, it's not better for life, it's not more humane, it's not better for the planet.

The [00:25:30] intention is good. Do less harm and be compassionate, but The [00:25:35] spoken logical intention of veganism is good, and [00:25:40] veganism is about death. It is a death cult. I've heard this, yeah. And [00:25:45] I'm just saying that, having been a devout raw vegan, is that [00:25:50] it's a deep hatred of the life and death cycle. You're trying to stop it.[00:25:55]

But if you just do basic math on the number of deaths that gave you your [00:26:00] impossible burger, it is much higher than a cow. So you have to willfully [00:26:05] ignore that. And this idea, I'm, I'm not going to eat things with [00:26:10] faces. Like why are worms and bugs not sacred? They are. And they're getting killed [00:26:15] by industrial agriculture.

Things like glyphosate that causes earthworms to have seizures at [00:26:20] 300 times below the level that's allowed in the soil. Huh. So if you [00:26:25] really respect the cycle of life, you, you really protect the [00:26:30] cows and the way that they regenerate the soil with their poop and their pee. Yeah, it's, it's beautiful. I mean, I'm sure [00:26:35] you've been to regenerative farms, but the soil, the soil on these regenerative farms is so [00:26:40] dark.

It looks like coffee, you know, white oak pastures, you pull up a handful of soil and it looks like coffee [00:26:45] grounds. Oh, yeah. And unfortunately, at the edge of the farm, you can walk a few hundred [00:26:50] yards to the right across a fence line and pull a handful of soil out of his neighbor's farm, which is a [00:26:55] peanut farmer, and it looks like weak chocolate milk.

And you can see that this is life. You know, this is, [00:27:00] this is actual carbon sequestered in the soil. He has, what, 5, 7 percent [00:27:05] carbon. His neighbor has 0. 5 percent carbon. And we know that this regenerative farming is [00:27:10] sequestering this carbon into the soil, and you can see it. It's alive, and it makes green grass, and And the cows are [00:27:15] happy.

It just looks right. When you're on the pasture at a regenerative farm, it just looks right. You can see the [00:27:20] cows. They're happy. There are bugs and there are birds and there are, you know, there's all sorts [00:27:25] of, of life around. And if you pull up the soil, there's worms and it's [00:27:30] alive. And that's the way it's always been.

These are grassland animals. You can feel different when you're there. And [00:27:35] I had a really cool experimental ground on my regenerative farm because We had a five acre [00:27:40] gravel pit that we restored and brought back to a proper ecosystem. Yeah. You can do that. Yeah. And we [00:27:45] did that, but then it takes a little while.

So the areas of where we would have our pigs, they'd be there for [00:27:50] a season and we'd move them around. And then the next year, beautiful, lush green grass. And [00:27:55] right next to where the fence line was, it's scrabbly, like it's still coming back. And you can just see the life [00:28:00] popping and the sheep come in and they frolick, and it's so beautiful.

And we're just going to kill all that to eat [00:28:05] soybeans because we're afraid of animals with faces.[00:28:10]

I don't regret what I learned from being vegan, which [00:28:15] was that my body was capable of massive autoimmunity and joint pain, and that I [00:28:20] could shatter three teeth. And all the other things that happen when you're malnourished. [00:28:25] So I, it helped me on my path, but my God, to tell young, fertile people to do [00:28:30] this.

It's not just a crime against them. It's a crime against the children [00:28:35] they have because they have lower IQs. We know, and the children are more susceptible to illness. And [00:28:40] I mean, did you see the study I posted about this study recently? I think it was from 2013 and it [00:28:45] was in Kenya. And they took this study.

three groups or four groups of kids in Kenya. These were first graders. They [00:28:50] followed them for two years and they gave them all isocaloric diets and they gave them all sort [00:28:55] of this basic diet, which is called Githery, which is a vegetable stew. It's a Kenyan vegetable [00:29:00] stew. The control group gets the regular vegetable stew.

The first group gets vegetables too, plus [00:29:05] seed oils. The second group gets vegetable stew plus milk. And the third group that's an experimental group [00:29:10] gets vegetable stew plus meat. And at the end of two years, the meat group is [00:29:15] clearly outperforming all of the other groups on every single metric, whether it's math, [00:29:20] recall, spelling.

It's just, it's so obvious that this makes children [00:29:25] smarter, and depriving children of animal based nutrients is not allowing [00:29:30] them to realize their full potential. It's so tragic. This happened at my kid's Waldorf school. There was [00:29:35] one or two vegans. in the class. So the teacher said, we'll just feed everyone vegan.[00:29:40]

And I just said, absolutely not. Like, I came in and put my foot down. Like, just [00:29:45] because some people have an eating disorder doesn't mean everyone has to have it. Look, I respect vegans. And [00:29:50] I mean, I think we should say it, you know, I think veganism along with a lot of other things are kind of societally [00:29:55] accepted eating disorders.

I respect all life, including all humans, even [00:30:00] ones I disagree with. It doesn't mean I'm going to be untrue in my words. And [00:30:05] It's an eating disorder that's caused by marketing. Yeah. It's caused by propaganda from PETA, [00:30:10] and it's caused by Big Food wanting to sell you peasant food for a more expensive value.

That's [00:30:15] what it comes down to. We can survive on all kinds of crap, like oatmeal, which we're going to talk about in a second, [00:30:20] but just because you can survive on it doesn't mean you should pay 8 for overnight oats. [00:30:25] So tell me about oatmeal. I get so much flack when I talk about oatmeal, which is so [00:30:30] interesting because there's so much evidence and there are so many reasons that oats are peasant food, [00:30:35] as you say, in contrast to food of royalty, which is the animal foods predominantly.

So [00:30:40] oats, oats have the same problem of saponins. You mentioned phytic acid. Oats have the problem of phytic [00:30:45] acid. And when I talked about oats, I got pushback. The, the, the brilliant retort from the other [00:30:50] side of the nutrition community was, oh, you denature phytic acid when you cook the oats. Only 40%. [00:30:55] That sounds like a big fantasy to me.

Yeah, you're only getting rid of 40%. Like if you actually want to [00:31:00] fully Get rid of the phytic acid, which is this large large molecule that chelates minerals and prevents their [00:31:05] absorption in the human body You have to it's like that. It's like the quinoa you were describing you have to ferment the oats at a pH of [00:31:10] 4 Right.

So an acidic pH not a not a water pH an acidic pH at a temperature [00:31:15] of 96 degrees Fahrenheit for 7 to 10 days No one is making overnight [00:31:20] oats like that. Every single bowl of oatmeal that you are eating is robbing you of minerals because there [00:31:25] remains a significant amount of phytic acid. And then oats also have, often, glyphosate contamination.[00:31:30]

They, like many grains, they also accumulate metals, which is interesting to me. [00:31:35] That the plants, for whatever reason, probably because of the phytic acid, will pull metals [00:31:40] into their seeds. And so you have to be very careful about the sourcing of your plant seeds, whether it's [00:31:45] cacao or oats or wheat or quinoa.

These actually have pretty significant levels of heavy [00:31:50] metals. In the case of oats, I believe cadmium is a major contributor and a, and a contaminant oats. So [00:31:55] there are so many reasons that oats are a really pretty horrible thing to eat for [00:32:00] breakfast, but look, I grew up eating oatmeal. I did too. I, I ate so much oatmeal in [00:32:05] college that I think I gave myself recurrent stress fractures.

Wow. I wasn't really [00:32:10] running that much. I was probably only running 40 to 50 miles a week, but I was getting into running and I was a [00:32:15] poor college kid. And look, oats are cheap, and oats, plus banana, plus [00:32:20] pasteurized milk, taste great. And why can't I eat that two times a day, Dave? And three [00:32:25] times a day, and then eat some, then eat some pasta with a little bit of tuna out of the can for dinner.

That's a great dinner. That's my [00:32:30] college, basically, diet. Sure. Stress fracture in my femur. Wow. My femur, you know. [00:32:35] That's hard to stress fracture. It's very hard to stress fracture. My father, who's a physician, was concerned that I [00:32:40] had a sarcoma, like a cancer, and I had to have a bone scan, and my family was worried that I had [00:32:45] cancer because it's so unlikely that you would stress fracture your femur, but I stress fractured my femur [00:32:50] running, almost certainly due to a semi vegetarian diet high in oats, [00:32:55] robbing me of minerals.

Wow. It's funny, I put on my regenerative farmer hat. [00:33:00] And I don't have this issue because my animals ate real food. On most farms, [00:33:05] when you're feeding the amount of soy and corn and grains, there's so much phytic [00:33:10] acid that chickens and cows can't stand up because their bones are so weak. Oh my god. So what they [00:33:15] do is they add an enzyme that helps them.

These animals digest the phytic acid. Now, [00:33:20] cows and chickens can actually digest some phytic acid that you and I can't. But even then, [00:33:25] that artificial diet for them is overwhelming them, so they have no minerals in them. So they put [00:33:30] enough phytic or enough phytase in to break down the phytic acid so they don't get really sick.

But you're [00:33:35] not getting mineral density in that meat, right? Because the phytic acid [00:33:40] stole the minerals. And that's why I've been telling people for a long time, you need to [00:33:45] supplement minerals first. And one of the things that you and I totally agree on is a [00:33:50] moderate amount of of organs. And you have a new product that does that.

And [00:33:55] I, I recommend taking organs. I recommend Minerals 101, which is my, [00:34:00] it's not animal based, but it's all proper forms of minerals. Take them both, I do. Yeah. What's the name for yours? The whole [00:34:05] package? So this is, so the first company that I founded was Hardened Soil Supplements. And I wanted to make [00:34:10] organs in these capsules, so I brought you whole package, which is my favorite supplement that we make, and [00:34:15] it's testicle, liver, and blood.

Sweet. There's very interesting research that I want to, I'd love to tell [00:34:20] you about. The team at Heart Soil found this in a library in Germany, and there are multiple [00:34:25] researchers, and it's this interesting historical sort of lineage. There are multiple researchers over the last, let's [00:34:30] say, 70, 80 years. that have been doing this research in Germany and a little bit in the United States looking at [00:34:35] organs supporting the corresponding organ.

Yes. But because it's not part of the canon of United [00:34:40] States research, we're never taught about it, but it's fascinating because we've known for probably [00:34:45] 60 to 70 years that if you take an embryo, a growing embryo, and you place a little bit of liver [00:34:50] extract on the liver embryo, that extract, If it's liver, it'll cause the liver of the [00:34:55] embryo to get bigger.

Wow. So the corresponding organ gets bigger when you place the extract there. And then [00:35:00] similarly, when you inject the organ with radioisotope labeling, the radioisotope [00:35:05] will concentrate in the organ of choice. Wow. Do you know who Brown Sicard was? So [00:35:10] he's a He's a famous physician. He taught at Harvard and this elite university in Paris in the late [00:35:15] 1800s.

He published an article in the Lancet, I think it's 1899 or 1889 [00:35:20] about injecting himself with testicle, testicle extract. Wow. And he was 72 years [00:35:25] old and noted, this is just anecdote, but noted extreme benefits or notable benefits [00:35:30] from injecting himself with testicle extract in the late 1800s in the Lancet.

That's crazy, right? It's really [00:35:35] interesting and fascinating because the benefits of the organs are [00:35:40] probably. Independent of the actual nutrients in the organs. Yeah, it's a signal. [00:35:45] It's a signaling molecule. Yeah, there's, yeah, I'll just say this to get a [00:35:50] bioavailable dose of testosterone. That's, that's significant.

You'd have to eat 500 pounds of testicles. Yeah, [00:35:55] but if you eat gram quantities of testicle, what appears to happen is [00:36:00] the hypothesis is this is micro RNAs. It's in the microsomal fraction of the extract. [00:36:05] And so these micro RNAs https: otter. ai Somehow transit to the organ and [00:36:10] affect gene transcription or translation at the level of the organ you can it seems to be [00:36:15] incredible It's really just the newest thing that we've been thinking about but it's wild, you know Small [00:36:20] doses of organs even in capsules that are freeze dried can support the [00:36:25] corresponding organ That's really cool.

And like so interesting evolutionarily across species [00:36:30] There's another lineage that contributed to that and I wrote about it a lot in superhuman my [00:36:35] longevity book These are bioregulator peptides, and what the Russians figured out [00:36:40] is they could take organ extracts from young animals and a few drops of [00:36:45] that or a little capsule has profound, measurable, and repeatable effects on your [00:36:50] health.

It's a similar vibe. So I tell people, look, take your organs, you don't want to eat [00:36:55] two pounds of organs a day because your uric acid will go up. Yeah. You need a certain amount of that. You've got that. [00:37:00] But organ meat is also very mineral dense. It's a way to get minerals into the body. So you do that. [00:37:05] Take your minerals 101.

Danger coffee is also full of trace minerals. I don't know if you know about that. It's [00:37:10] got a therapeutic dose of humic and fulvic in it so that it actually restores [00:37:15] minerals inside your cells when you drink it. Is it in the coffee or do you add it to the coffee? It's in the coffee. Because of the way the coffee beans are [00:37:20] grown?

Oh, we add it during the roast. Oh, interesting. We figured out a proprietary way [00:37:25] to do it. That's cool. And so you're getting your trace minerals and electrolytes when you drink [00:37:30] it. And your body's like, this is really good coffee, but there's some other reason [00:37:35] you want it. It's your body going, thank God, minerals.

So mineral sufficiency [00:37:40] gets you to the point where I just, I had a foot surgery about three years [00:37:45] ago and they had to cut through the bone. It's just to fix an old yoga injury I didn't, I didn't heal [00:37:50] right because I was walking around and just ignoring it. That was my bad. [00:37:55] I was awake for the surgery, and the doctor, I did a whole podcast with him, Dr.

[00:38:00] Ali Sadria. I'm awake, and I can't feel anything, and the bone saw goes, and [00:38:05] he looks at the nurse and goes, I'm having a hard time getting through the foot, and I'm like, it's feeling hot down [00:38:10] there from, from the friction. And afterwards he said, Dave, I operated [00:38:15] on someone half your age, same surgery before you, their bones cut like butter, and I couldn't get through your bone.

[00:38:20] What are you doing? Right. I'm doing organs, I'm doing minerals 101, I'm doing biohacking. [00:38:25] So bone density is one of the biggest predictors of metabolic sufficiency and [00:38:30] health and longevity, right? Do you measure your bone density? I do, I had a DEXA recently, yeah, it [00:38:35] was, it was really good. Yeah, and this, both of those have been raw vegans, which basically means you [00:38:40] have They say nerf as your bones.

Probably. Many years ago. Yeah. But [00:38:45] recently, yeah, my bones are great. Yeah, it's something you can heal. I mean, we both had weak bones. I would, I shattered teeth as a raw vegan, [00:38:50] like I said. So, those are signs of mineral deficiency. Not necessarily because the minerals were missing from the [00:38:55] plants, because the plants won't let go of the minerals, and they were taking my minerals to tell me not to eat the plants.

They're not [00:39:00] bioavailable in the plants. This is another huge fallacy with plants, right? People say, oh, eat almonds for magnesium. Oh, good [00:39:05] God. Good luck. You're not getting any. No, eat almonds for oxalate and kidney stones. Yeah. Yeah. One [00:39:10] of the, I remember that when I was a raw vegan, 25 percent of my diet was almonds.

Oh dude, me too. Soaked almonds [00:39:15] all the damn time. And it was the lowest I've ever had my magnesium based on multiple different types [00:39:20] of assays, whether it was indirect or direct assays, RBC magnesium, it was in the toilet. I had [00:39:25] almost no magnesium as a full raw vegan. Let's talk about fat. Let's talk about [00:39:30] fat for 15 years, I have been actually longer than [00:39:35] that, biohacking has been around for 14, so actually 19 years, I've been religiously [00:39:40] avoiding seed oils, right?

And I mean, really, I just don't eat anything that's a seed oil. I'm [00:39:45] probably a little bit low on arachidonic acid right now. So I actually am eating [00:39:50] two teaspoons of cold pressed seed oil now just to get my ratio up [00:39:55] to four to one. I'm a ratio is 2. 7 to one of a six to three. [00:40:00] So that is a profound beneficial effects on my health.

As you'd predict in testosterone, all this stuff [00:40:05] that we both have written about. But I, I see people going out even [00:40:10] lately and Brian Johnson, who's a friend, has been on stage at my conference and like anyone in the longevity movement, [00:40:15] he's saying, well, there's no evidence that cedar oils are bad for you.

He tweeted that yesterday. And I'm like, [00:40:20] okay, I wanted to go into some of the science on that. Cause when I interviewed him, I was like, let's talk about olive oil and [00:40:25] excess. And he's like, I have to ask the doctors. I don't know. So I haven't seen though, multiple [00:40:30] studies, usually funded by cedar oil saying, you know, canola oil is good for you and things like that.[00:40:35]

Walk me through what you know as a double board certified physician about what [00:40:40] seed oils do to us. So, I think you could arrive at the conclusion that seed [00:40:45] oils are benign or potentially beneficial for humans if you [00:40:50] ignore all of the historical evidence, all of the evolutionary evidence, Of their, you [00:40:55] know, use in humans, which is none, right?

If you ignore all of the mechanistic data, [00:41:00] all of the animal studies, and you cherry pick the randomized controlled trials, generally [00:41:05] only reading the abstracts and not looking at the materials and methods, that is how you arrive at the [00:41:10] conclusion that seed oils are benign for humans. If you do anything other than that, or you [00:41:15] actually read the studies that you are citing, whether it's LA Veterans, Minnesota Coronary [00:41:20] Experiment Sydney Diet Heart, Rose Corn Oil you know, the, the DART study, [00:41:25] uh, like, any of the studies that people would cite the Finnish Mental Health Study, [00:41:30] any of the studies people would cite, either for or against seed oils, you arrive at a very different conclusion, and so, [00:41:35] it was kind of painful to see his tweet, and I haven't had a chance to respond to it, because I've just, you know, Was I was [00:41:40] actually at the premiere so heart and soil who makes the whole package supplement.

We released a [00:41:45] mini documentary last night Called fed a lie about seed oils and I was doing that [00:41:50] and then doing other podcasts today Haven't had a chance to respond to brian johnson's sort of well intentioned but [00:41:55] factually inaccurate tweet about seed oils If you actually look so let's just zoom Let's just [00:42:00] accelerate and go right to the randomized controlled trials.

Let's say these are the highest quality of evidence. We [00:42:05] cannot read a meta analysis about randomized controlled trials with Pseudo Oils because then we are relying on [00:42:10] Darius Mazzafarian from Tufts, the same illustrious gentleman who brought us the food compass guidelines, telling [00:42:15] us that Froot Loops and Cheerios.

are more nutritious or better quality food than beef and eggs. [00:42:20] He is the author of a often cited meta analysis on sea oils, which happens to leave out certain [00:42:25] trials that are very valuable. We could call that China Study 2. 0. Yeah, a little bit cherry picking, right? [00:42:30] So if you look at the studies that are randomized and controlled in humans on sea oils, unfortunately, [00:42:35] these were entirely done between 1952 and 1973.

There have been [00:42:40] no, at a zero, randomized controlled trials done in humans since 1973. [00:42:45] The major problem here is that trans fats are really only something that were [00:42:50] regulated in the 80s and 90s. We didn't even really fully understand how [00:42:55] damaging trans fats were for humans in the 50s, 60s, and 70s. So, so many [00:43:00] of these trials are confounded by the inclusion of trans fats in the control group or the [00:43:05] experimental group, questionably, right?

So, if you look at these trials, almost [00:43:10] invariably, the ones that say that seed oils are benign are multi intervention trials. [00:43:15] So, they're in the control group, they're saying, keep eating your normal diet. in the interventional [00:43:20] group keep eating your normal diet in the control group, which may include trans fats and your [00:43:25] margarines.

The experimental group gets seed oils, but they also eat more vegetables, they smoke less, they [00:43:30] exercise more, and they get counseling on what a healthy diet is, right? So there's, there's [00:43:35] five interventions there, and you have no idea how many trans fats were in either [00:43:40] group. And this group over here is a multi factorial intervention, which we know you cannot use that [00:43:45] to draw a conclusion about seed oils.

That is stupid. That's like medical school first day. But that isn't, [00:43:50] multiple trials like that are included in meta analyses like these from Darius Mazzafarian that say seed oils are [00:43:55] beneficial. There is another famous study that says seed oils are beneficial or benign, the Finnish Mental Health [00:44:00] Study, which looked at two different mental health hospitals.

The problem is that, If you look at the [00:44:05] control group in those studies, the control group is getting far more medications like Thorazine, [00:44:10] which are cardiotoxic. So, how are we to make any conclusions here? [00:44:15] And then there's problems with randomization, and the design and the execution of these [00:44:20] studies from the 50s to 70s is abysmal, across the board, essentially.

One of the best studies with [00:44:25] seed oils is the Rose Corn Oil Study, which was one of the first studies. Unfortunately, it was slightly [00:44:30] underpowered. The physician who did the study, his last name was Rose, and it looked at like 80 or 90 [00:44:35] people. And they gave some of them corn oil, and some of them, I believe, just continued eating animal [00:44:40] fats.

And they stopped the trial early. This was a very quick trial. Most of the seed oil trials are 3 to 8 [00:44:45] years. LA Veterans is 8. Minnesota coronary was a variety of, of times. They stopped the [00:44:50] trial early because so many more people were dead in the coronal group from the [00:44:55] from the cardiovascular disease.

The difference almost reached statistical [00:45:00] significance. The P value was between 0. 1 and 0. 05. Usually 0. 05 is our cutoff, [00:45:05] right? And the authors, verbatim say in the paper, the chance that this result of seed [00:45:10] oils causing more cardiovascular death is due to chance is less than one in a [00:45:15] thousand, but because that didn't reach statistical significance, get brushed off, not included in the meta analysis.

[00:45:20] That's one of the first trials on seed oils. Wow. Very clean, just corn oil versus saturated fat from animals. [00:45:25] And it's had a pretty clear result. It just needed to be a little bit bigger trial power. 200 [00:45:30] people would have gotten there, would have gotten there. And that might've been the end for seed oils, but no, there was the [00:45:35] finished mental health study.

There was dart, there was so many other trials. And then, so this is the problem is that [00:45:40] over and over and over we have problems with the design of these studies. The only other real [00:45:45] study that you could look at, and I mean this very clearly, I'm not speaking in hyperbole here, but you could even [00:45:50] cite, To say that seadolls are potentially benign for humans is the L.

A. Veteran's study. And this is an [00:45:55] interesting one. And the L. A. Veterans went eight years, and the problem with the L. A. Veterans [00:46:00] were a couple of things. The control group had significantly more smokers, [00:46:05] heavy smokers, than the experimental group. So the control group is supposed to be the saturated fat group.

[00:46:10] Significantly more heavy smokers in the control group than the experimental group. Okay, that's not great. And then [00:46:15] if you look at the diets between them, and then remember, this is like, LA Veterans, I believe, was like [00:46:20] 1967. It went for eight years, or maybe it was early 60s, like mid 60s. The amount of vitamin [00:46:25] E in the control group is very low.

So if they're really giving the people in the, in the [00:46:30] control group, like real animal fats that should have more vitamin E, if they're giving [00:46:35] them butter or tallow or lard, you should have far more vitamin E. So there's this, there's this kind of [00:46:40] confusing idiosyncrasy in the diets. This is the problem.

The trial is 70 plus [00:46:45] years old. We don't care. Actually know what people are eating. Wow. And at eight years in the LA [00:46:50] veterans trial, there is a really marked uptick in cancer in the experimental group, getting [00:46:55] the seed oils. So people always point to that and say, well, do we know what happens if you eat seed oils [00:47:00] for 10, 15 years?

And one of the problems with sea oils is potentially immunosuppression. [00:47:05] You know that seed oils have been given to animals and also humans, historically, to prevent [00:47:10] organ graft rejection? Wow. So they, yes, organ allograft rejection has been [00:47:15] sort of tested with seed oils. So the curiosity or the hypothesis might be, if you're giving [00:47:20] someone lots of seed oils, like most Americans are eating, for their lives, are you getting immunosuppression?

Are you [00:47:25] getting problematic issues with immune surveillance that can lead to cancers long term [00:47:30] also. I think the cardiovascular disease is the major issue with seed oils due to oxidative liability, and we can [00:47:35] talk about that, but I think that the diets in these studies are just so questionable. We don't [00:47:40] actually know what people in these studies were eating.

There are two other trials that I should mention, Sydney Diet [00:47:45] Heart and Minnesota Coronary Experiment. Neither of those looks good for seed oils. Sydney Diet Heart [00:47:50] clearly showed that the group eating more seed oils had lower rates of or higher rates [00:47:55] of death from cardiovascular disease, earlier morbidity, earlier mortality.

That's a [00:48:00] problematic trial for seed oils. And the way that seed oil proponents get around that is they say, well, the people in the [00:48:05] experimental group, they were eating a miracle margarine and that might have had trans fats. Then people say, well, maybe there [00:48:10] were trans fats in the experimental group in city diet heart.

My response to that would [00:48:15] be, we know that trans fats raise LDL and the LDL of the experimental group went [00:48:20] down in synedite hearts. So again, we're, but we're still looking, we're still looking and we're like, this [00:48:25] is, these are all imperfect trials, Minnesota coronary is not perfect. We do not have a perfect trial.[00:48:30]

It's crazy to say, but in some ways, Rose corn oil is the [00:48:35] cleanest trial we have. Wow. But Darius Mazzafari and others have written meta analyses. [00:48:40] They're kind of like, it's like garbage in, garbage out, you know? Yeah. You cannot expect to build a multi million dollar [00:48:45] beachside condo out of a landfill, but that's what people are trying to do when they're saying, look at these [00:48:50] studies that say that seed oils are benign and they're just, they just don't exist.

I think if you look at the [00:48:55] sum, there's a clear signal. And that's not even looking at animal studies, mechanistic studies. Yeah. And [00:49:00] they're, they're, This is not even including studies that are done in humans looking at oxidized LDL. So [00:49:05] that's a big one. It's not a real outcome measure long term, but it's a, it's a mechanistic metric.

And there are [00:49:10] multiple randomized controlled trials in humans showing that when you feed seed [00:49:15] oils versus olive oil or versus animal fats, you certainly see an uptick [00:49:20] in oxidized LDL and LP little a. So, indicators of LDL [00:49:25] oxidation, and that makes a lot of sense biochemically, if you have more polyunsaturated fats in your [00:49:30] LDL particle, and linoleic acid, this 18 carbon omega 6 polyunsaturated fat, is the [00:49:35] highest population in an LDL particle, the single greatest representation [00:49:40] of lipids, you know, fats in an LDL particle is linoleic acid.

And if you eat more [00:49:45] linoleic acid in your diet from seed oils, especially oxidized linoleic acid. Even before you eat [00:49:50] it from a refined bleach and deodorized oil, you're going to get more linoleic acid in your LDL. And at some [00:49:55] point you overwhelm the intrinsic mechanisms within an ApoB particle to maintain that [00:50:00] linoleic acid as unoxidized, right?

You mean you overwhelm the vitamin E and the lipid fraction, you [00:50:05] overwhelm any coenzyme Q10 and you get oxidized LDL. And I think. Oh, most people would agree that oxidized [00:50:10] LDL is the real problem. That is the atherogenic particle. And there are multiple types of [00:50:15] modified LDL now. There's even sialylated LDL, which is probably a precursor to [00:50:20] oxidized LDL.

But basically modified LDL, not native LDL. Native LDL [00:50:25] looks pretty darn benign for humans. Maybe even good for us. I would argue it's definitely good for us from an [00:50:30] immune perspective. So the seed oil conversation, once you start to get into the oxidized LDL [00:50:35] studies, and you look at the mechanistic studies, the formation of just the lipid products that happen, [00:50:40] I mean, you probably saw the study when they cook french fries in seed oils, you [00:50:45] get amounts of acrolein and other alpha beta unsaturated alkyls.

Canes [00:50:50] that are equivalent to a pack of cigarettes in a large serving of French fries at McDonald's. So [00:50:55] I've been telling people for years, if I could eat a plate of fries or smoke a cigarette, I'll take the [00:51:00] cigarette. I want either one. Well, if you have one cigarette, yeah, one cigarette is far less than a plate of fries.

I've never smoked [00:51:05] a cigarette, but I would versus eating a plate of French fries from a fast food restaurant. A plate of [00:51:10] french fries from a fast food restaurant has the same amount of these sort of oxidation [00:51:15] products of oil breakdown as 25 cigarettes. Yep. That's crazy. So once you [00:51:20] start looking at that, and then you look at the animal studies, which are invariably, like, show harm, [00:51:25] and then you look at human history and you say, oh, wait, we've never had seed oils.

You'd have to have [00:51:30] 75 years of corn to get 5 tablespoons of corn oil, which is the average consumption of an American. Oh, wait, [00:51:35] look at how seed oils are made. They're refined, they're bleached, they're deodorized, they're heated to 500 degrees Fahrenheit. [00:51:40] Maybe we can, like, lean to the side and, and safety and say, like, these are probably horrible for humans.[00:51:45]

Very well said. There's two things I want to ask about. One is about [00:51:50] nicotine, and the other one is about olive oil and linoleic together. [00:51:55] So let's take a little side trip down nicotine lane. Okay, let's go down nicotine lane. So [00:52:00] about eight years ago, I interviewed a professor, I call him Dr. Nicotine from Vanderbilt [00:52:05] University.

And he said, He published the first study showing that pharmaceutical nicotine, not [00:52:10] smoking, but pharmaceutical nicotine prevented Alzheimer's disease. Interesting. And he has published [00:52:15] study after study. People who smoke get cancer, it's bad for you, but they don't get Parkinson's in [00:52:20] Alzheimer's. Hmm. So it looks like low dose nicotine is neuroprotective.

And I've been using [00:52:25] it as a cognitive enhancer and a longevity compound for my brain for [00:52:30] 10 years now, and it's starting to make the rounds in biohacking. Andrew Huberman just started talking [00:52:35] about it. And there was an article today because Robert F. Kennedy [00:52:40] Jr was seen like walking out of a shop with some nicotine.

And I'm thinking [00:52:45] nicotine without all the tobacco nonsense has benefits, [00:52:50] certainly in low doses, and they're actually undeniable benefits. You can say, well, it's addictive. Yes. Right. So it [00:52:55] was exercise. So, are you read in on nicotine? I [00:53:00] haven't thought about it much. I mean, it's a neurotransmitter that occurs normally in the human body.

[00:53:05] Like, I haven't really gone down the rabbit hole on nicotine much. Yeah, I need to experiment with it. Okay, I will, [00:53:10] uh, I'll plug you into that rabbit hole. Okay. It is a very potent [00:53:15] protector of neurons. Interesting. And I'm not saying people should smoke or vape, those are bad for [00:53:20] you, you shouldn't chew tobacco, but microdosing nicotine I think is a major longevity thing that's [00:53:25] overlooked.

Interesting, yeah. Now, are you familiar with D5D and D6D? Yeah, yeah, of [00:53:30] course. Do you know what excess oleic acid does to those? Yeah, [00:53:35] yeah, oleic acid has interesting effects on D5D and D6D. Let's talk about what happens if you only [00:53:40] consume olive oil as a part of your longevity diet. Well, like, so this is interesting.

This is kind of like [00:53:45] the Brad Marshall stuff almost, like fire in a bottle. I, I think that the jury's out on this. It's so [00:53:50] interesting. I, so, okay, we can back up for a minute. So D5D and D6D are Delta [00:53:55] 5 desaturase, Delta 6 desaturase. They're encoded for by the FADS1 and FADS2 gene, fatty acid [00:54:00] desaturase genes in human genetics.

And there's actually Mendelian randomizations that [00:54:05] say that D6D is causal in atherosclerosis. Oh my god. Yeah, it's a [00:54:10] Mendelian randomization. And I, you know, D6D is pretty, And D5D are part of this [00:54:15] cascade of the modification of linoleic acid into DGLA and [00:54:20] eventually arachidonic acid. And so there's also evidence that people who have certain polymorphisms [00:54:25] of both D5D and D6D, but some of them are more telling than [00:54:30] others, are more at risk of inflammation when they consume seed oils.

If you tend to push that [00:54:35] excess linoleic acid down this quote pro inflammatory omega 6 pathway of [00:54:40] modification, your genetics might determine how much that leads to inflammation. inflammatory you know, [00:54:45] downstream metabolites. Now what's interesting is that oleic acid also changes the [00:54:50] expression of D5, D, and D6, D, and it kind of Oh, yeah, oleic acid, the primary thing in olive oil.

It kind [00:54:55] of upregulates them. Not kind of, like 10X, like massively upregulates. Yeah, or the [00:55:00] breakdown product of oleic acid, the OEA, does this, and so The [00:55:05] question is, you know, should we be pumping, like, lots of oleic acid [00:55:10] into our body? And I don't know. I mean, I think that the studies showing longevity [00:55:15] benefits from olive oil are, you know, Interesting.

I mean, PREDIMED is probably the best [00:55:20] one, but has some major methodological flaws. And if you look at PREDIMED carefully, and [00:55:25] Brad Marshall, to his credit, has done a great analysis of this on his YouTube channel, he really broke down [00:55:30] PREDIMED. There are some signals in PREDIMED, at least in terms of the statistics, that excess oleic acid in this olive [00:55:35] oil did increase the odds ratios of diabetes and obesity.

In PREDIMED, nobody talks [00:55:40] about that. The real experiment in PREDIMED was not more olive oil, it was processed [00:55:45] olive oil versus extra virgin olive oil. And the people who had processed olive [00:55:50] oil or refined olive oil basically got no benefit. The people who had extra virgin [00:55:55] maybe had some longevity benefit, but I feel like it's a little bit overblown.

Like the, I don't [00:56:00] see olive oil personally as this magical longevity compound. And you're giving your [00:56:05] body a lot of oleic acid when you're doing that. So, now look. We can talk about [00:56:10] tallow because this is interesting as well. We're gonna get there, yeah. So tallow is about 50 percent oleic acid. It's not like we're [00:56:15] avoiding oleic acid.

We do de novo lipogenesis. We make oleic acid in our [00:56:20] body. We can interconvert saturated fats. We can interconvert you know, [00:56:25] stearic acid and oleic acid. We can interconvert these monounsaturated and saturated fats in our [00:56:30] human body. This happens. Yep. But there is a question which remains of whether we should [00:56:35] be having lots and lots of olive oil or And purposefully glugging [00:56:40] olive oil, and will that affect D5D and D60?

I think it's just, it's a question. In the [00:56:45] longevity community, this is going back to like the late nineties, early two thousands, I [00:56:50] was president of one of the first big longevity nonprofits. And our members went through [00:56:55] a phase of glugging olive oil. It's, oh, it's, you know, this is a big thing. And it [00:57:00] doesn't work.

And the reason that I believe it doesn't work is that if you're eating [00:57:05] excessive oleic acid, especially olive oil, that's all you're eating. It [00:57:10] means that all of the seed oils you eat will oxidize very quickly inside your body. And [00:57:15] you're going to get a much larger amount of inflammation. I recommend two [00:57:20] tablespoons or maybe two ounces.

If you really want to go there of olive oil. And I put some on my food today, so I'm [00:57:25] pro olive oil, but just cause something's good. Doesn't mean more is better. And you look at what is [00:57:30] the reason that olive oil is likely good for you, it's probably not the oleic acid because you can get [00:57:35] that from tallow.

It's gotta be the polyphenolic compounds, right? It's hydroxytyrosol. Yeah. And I put [00:57:40] this in the supplements I formulated back when Bulletproof made the supplements I formulated. Nothing to do with Bulletproof anymore. [00:57:45] And you get a hundred times more in a little capsule than you could [00:57:50] get from olive oil.

So, the phenols in it, Hallelujah, let's do [00:57:55] it. Some oleic acid, yes. Only doing olive oil doesn't appear to be a strong [00:58:00] longevity strategy mechanistically and from studies, but you should have some. And we [00:58:05] know that. I mean, there's clear studies now. That survey, the quality of olive and [00:58:10] avocado, 75 plus percent of both are cut with seed oils.

Yeah. You know, the peroxide [00:58:15] values of many of these exceed the advertised peroxide values, don't even meet the [00:58:20] acidity criteria for an extra virgin olive oil. A lot of olive oil is pretty garbage, you know? So, [00:58:25] When I talk to people about olive oil, I always put a big asterisk, and I say, I don't eat olive [00:58:30] oil.

I just do tallow and butter and raw dairy. If you want to do olive oil, my [00:58:35] perspective is organic, extra virgin, in opaque glass, single [00:58:40] source. Yep. Likely to be less, you know, contaminated with acete oil. And again, [00:58:45] you don't need to drink it. You just don't need to drink it. A little bit on your food, good.

Don't [00:58:50] heat it. You mean I shouldn't fry my food in it? Don't heat your food in olive oil. And definitely [00:58:55] not in a non stick pan, guys. And so, I love the anti seed oil movement happening in restaurants. [00:59:00] And it's step one of three, right? Because most of them are going, oh, we cook in olive oil. [00:59:05] You know, the first, uh, No seed oil, no olive oil.

All [00:59:10] grass fed restaurant in LA was the Bulletproof Cafe. I ran it for eight years and we [00:59:15] only used ghee and tallow. We didn't use any of the other stuff and only [00:59:20] grass fed and wild caught. And I mean, it was a phenomenon for about eight years till the neighborhood went to [00:59:25] hell and shut it down during the pandemic.

But now you can get grass fed a lot of places. And if you're looking for [00:59:30] no seed oils, there's a couple of restaurants here in Austin like the well I do a, I do a, but [00:59:35] then there's also a true food kitchen. Yeah, they're great, right? They're great. And they're [00:59:40] not fully zeros. They don't use any cereals, but there might be some in some of their ingredients.

And [00:59:45] I know Jason carp, the owner, he's a great guy, and he's working on that. [00:59:50] And you go back to when Andrew Weil owned True Food Kitchens. It was like a bunch of raw food, [00:59:55] vegan stuff. So they added regenerative ag in. So I'm really hopeful because more restaurants are getting on this. [01:00:00] And if you run a restaurant, you're listening to this, put a big sign on the front that says no seed oils and [01:00:05] watch how the people who come in are willing to spend more money and come more often because now they can eat there [01:00:10] every day.

Have you seen Seed Oil Scout? Yes. I love it. Yeah. My friend James. James was at the premiere last [01:00:15] night. That's happening. It's an app. My favorite steakhouse in L. A., I have no affiliation with him, [01:00:20] Matu. M A T U. Oh, I eat there all the time. It's so good. Yeah. It's grass fed New Zealand [01:00:25] Wagyu. I mean, it was, it blew my mind.

Like, I don't usually go to restaurants because it's a pain in [01:00:30] the butt having to ask about COs and all these things. I've gone on multiple dates there. And [01:00:35] it's, uh, it is, it is my favorite place to go. I went, I went on a date there. It was good. [01:00:40] Yeah, it was good. And yeah, it was, it was, it was, I was impressed.

I thought, wow, this is where I will always go in [01:00:45] L. A. The thing I love about Matu, as the menu just straight up says, if you want your steak more than [01:00:50] medium rare, it's disrespectful to the cow and you should eat somewhere else. Yeah, they don't even give you the truth. They don't [01:00:55] even ask you how you want your steak cut.

Like, you'll have the steak, there'll be salt on it, and we'll cook it the right [01:01:00] amount. It's so good. But there, there are options and ways to do this. But I, you know, this olive oil thing is really [01:01:05] interesting that you bring up. And I think that there is, this is an argument in my mind for animal fats, you know.

Damn straight. [01:01:10] Don't fear butter. Don't fear tallow. Don't fear ghee. It's all I've eaten for 15 years. I have a [01:01:15] little bit of olive oil and I'll eat some avocados, but not too many. And then the rest of it, it's [01:01:20] tallow. Yeah, a little bit of lard from well treated pigs. They were my pigs. I know they're right.

You know how they're [01:01:25] fed. And I also intermittent fasted them. So their fat was amazing. Okay. By the way, they weighed [01:01:30] half as much as my neighbor's pigs and had twice as much meat versus fat because like they're metabolically [01:01:35] healthy pigs. Yes. So I would eat that. Otherwise, lamb fat, beef fat. [01:01:40] Yeah. And butter.

And I do sheep. [01:01:45] Sheep dairy. Amazing. I don't handle cow dairy that well, but I'll do cow butter. Have you seen the research on the [01:01:50] odd chain fatty acids? Yes. These are really cool. 15 stuff? Yes. Like [01:01:55] pentadecanoic acid, which is C 15. Yeah, I've had those guys on the show talking about the research.

Yeah. So there's a [01:02:00] recent study that I came across showing that C 15, which is pentadecanoic acid and that [01:02:05] fatty acid is found in dairy. Yes. Fermented dairy. Yes. Yes. It is a, it is a [01:02:10] very strong indicator of. Dairy consumption in humans. And levels of C [01:02:15] 15 are inversely correlated with degree of ferroptosis in humans.[01:02:20]

And ferroptosis is apoptosis, programmed cell death related to lipid peroxidation. [01:02:25] Interesting. So ferroptosis is this mechanistic cell death that is related to excess seed oils in [01:02:30] our cells. If you stuff your cells full of polyunsaturated fatty [01:02:35] acids, whether it's linoleic acid or other polyunsaturated fats, and your body cannot [01:02:40] manage the oxidative liability of those, they will commit ferroptosis, which is iron, [01:02:45] ferro is the iron, you know, so it is an oxidative [01:02:50] derived cell death.

The more C15 you have in your cells, the less your [01:02:55] cells do that. So it looks like the potential here is that these [01:03:00] odd chain fatty acids may protect us The oxidative [01:03:05] stress, the oxidative liability of polyunsaturated fats in our diets, and yet which fats are getting [01:03:10] vilified? Dairy fats. Butter. Yeah, the ones that help you.

Yeah. It's funny. [01:03:15] I've for years recommended that you get unsalted Kerrygold. And the Kerrygold [01:03:20] has its problems. I've, I've talked about them as, I'll ad nauseam, I helped to do a, a [01:03:25] protest to get them like 10 percent not grass fed in winter. Fine, whatever. It's widely available. The [01:03:30] reason unsalted Kerrygold versus salted?

Unsalted. Salted Kerrygold butter is mechanically separated [01:03:35] butter. Unsalted is fermented. It's cultured. Cultured butter has the odd chain fats in [01:03:40] it. Yeah. It tastes different, but it's better for you. Right? So, guys, if you're listening, there's hundreds [01:03:45] of grass fed butter brands, thank God. Right? And Kerrygold's one of them that you can get at Safeway in a food [01:03:50] desert, and it's gonna be pretty good.

But it's not the most perfect you could get. So, I will [01:03:55] do that. And I do a lot of tallow. I cook with tallow or duck fat sometimes. [01:04:00] And what I love is that you're all in on this stuff, so you have your new lineage [01:04:05] and you guys, this is just a gift that Paul brought for me because he knows that I'm going to eat it, but it's [01:04:10] cool.

Tell me about the cows that make your grass fed towel. Like, why should I eat your breath? So this is a [01:04:15] really, this is a brand that I'm really proud of. There, there is so much issue, I think, for humans with convenience [01:04:20] food that is garbage. So lineage, we wanted to make like the best quality convenient [01:04:25] foods that we could.

And wow. Yeah. It smells good. It smells like good. And you can see that [01:04:30] that tallow is like more yellow than most tallows. Very yellow. So this is from grass [01:04:35] fed regenerative cows in Australia. Wow, it smells really good. These are the best cows I've ever seen. I went to [01:04:40] Australia to source these cows.

They're in the southern part of Australia and Tasmania and these are cows eating [01:04:45] grass literally like million dollar real estate They're eating grass Overlooking the ocean you can [01:04:50] I'm on a pasture with these cows and we have pictures of this on the lineage website And they're they're [01:04:55] literally eating grass and I would build a condo there like looking at the ocean between you know [01:05:00] between like You know the southern part of Australia and Tasmania.

You're looking at the the water to [01:05:05] Tasmania to the south and it's incredible and it's the same meat that we use for the air [01:05:10] dried steak and the beef sticks. I brought you from lineage and we use simple ingredients in there I just wanted to make convenience [01:05:15] foods high quality for people and it's cool to be in a place where I can do that It's actually really hard to do [01:05:20] that so hard the The darker the fat on an animal, the [01:05:25] healthier the animal was.

And we would have this with the sheep on my regenerative farm. [01:05:30] They were semi wild, and you know, they slept in the pen, but they just wandered the property and ate whatever they [01:05:35] wanted. And so they did a little bit of rosemary, a little bit of this, and they Right. And we would [01:05:40] sell the lamb at the local natural food store.

Someone would come here, I don't really like lamb, but I'll try it, and they'd come in [01:05:45] the next day and just buy it all. Because, like, I feel so different, and the fat was yellow. And you just [01:05:50] were used to this gross white fat from grass fed or from grain fed animals. And [01:05:55] I look at that if, say, Instacart makes a delivery of the wrong kind of steak.

Like, [01:06:00] ew, it's the wrong color, and you cook it, and it tastes bad. Because grass fed meat has its own [01:06:05] healthy flavor, and that is the darkest tallow I've ever seen. There's a, you know there's a grading scale for [01:06:10] tallows? No. I didn't know this until we started making tallow. That's a 9 out of 10. Like, that's the highest [01:06:15] rated tallow I've ever seen.

So I didn't know, I had no idea there was a, there's a rating scale for, it's like a wine, it's like Wine [01:06:20] Spectator.

I was [01:06:25] friends with the guys who started Epic, you know, the meat sticks and all years ago before they sold it to, was it [01:06:30] Kraft or somebody? General Mills. General Mills, thank you. So what's the difference between Lineage Tallow and [01:06:35] Epic Tallow? The sourcing of the cows. Okay. So they're not using regenerative, I love the guys at Epic [01:06:40] too, I'm friends with them, they have a ranch here outside of Austin, I think the people that sold it.

Yeah, cool guys. Yeah. And [01:06:45] we just use different cows. So these cows are eating. It's higher quality animals. Greener grass, I guess, yeah. What's the difference in cost [01:06:50] between Lineage Tallow and the average tallow you're gonna find? It's about, it's just a little more expensive. So this is about [01:06:55] 19 a bottle.

I was, I was just in Whole Foods and I paid 17 a bottle for Epic [01:07:00] Talo. Yeah. So it's, it's in line. Well, I am very happy to eat lineage. That's so [01:07:05] good. The other one that I'm a fan of is a silver silver light. [01:07:10] Okay. It's the kind of beef they serve at Matu, actually. Oh, the what is, oh yeah, the New [01:07:15] Zealand, the grass fed Wagyu.

Yeah. And so they, they also have a tallow that's pretty good. I bet. But it's not this [01:07:20] dark yellow. So I'm I will very happily eat this. That's pretty cool. I also put it on my face. [01:07:25] It smells like really good tallow. Guys, I don't know if, if I'm nerding out too much here, but you can [01:07:30] smell a good tallow.

And this just, it, it's got the right smell. Okay, [01:07:35] let me ask you this. Most of the tallow I get says keep it in the fridge, yours says cool, dry [01:07:40] place. I hate hard tallow out of the fridge because I can't smear it on my ribeye before I cook it. Yeah. What's going to [01:07:45] happen if I leave lineage tallow on the counter?

I mean, it'll be fine, you know? That's what I thought. I mean, it'll be fine [01:07:50] for the next month or two, you know? Like, I wouldn't, I would, I would refrigerate it if you're going to keep it for more than a [01:07:55] month, but if that lasts you more than a week, I'll be surprised. Okay, there you go. So, yeah, it takes a long time for the [01:08:00] fats to go rancid.

All right, that makes sense. All fats will, but like, this is the problem. Think about this going back to our [01:08:05] conversation about seed oils, right? Refined bleach, deodorized, highly polyunsaturated, put in a [01:08:10] plastic bottle, which we know leaches antimony into the, into the seed oil. It's a transparent [01:08:15] bottle with blue lights in the store that are clearly damaging the oil.

How long does the average [01:08:20] bottle of canola oil, soybean oil, or corn sit on the shelf in room temperature? Six [01:08:25] months? Eight months? I will not eat that oil ever. I just literally, [01:08:30] it's been 15 plus years. I think that's, that's one of the keys to help. It's, it's cumulative, right? People [01:08:35] always ask me, how do you detox seed oils?

Potentially you eat fermented butter, you know, or [01:08:40] you eat fermented dairy for the odd chain fatty acids and you just stop eating it. Probably take some fatty [01:08:45] 15 at the same time. Yeah, same thing. It's, and I have a full episode where I go really [01:08:50] deep on the science of fatty 15 as well, because it's, it's cool.

Odd chain fatty acids are fascinating. They're really [01:08:55] cool. There's another one, I believe it's C 17. Yeah, that's, that's heptadoic decanoic [01:09:00] acid. If it, it's either, it's either C23 or C17, I'm forgetting right now, in the early, early days of [01:09:05] Bulletproof, before I came out with my own MCT, you'd buy street grade MCT [01:09:10] and it would give you, we used to call it disaster pants, or, my daughter renamed it [01:09:15] underwear surprise, but, but, it, it was a, it was a [01:09:20] thing, and, Um, Kelly Starrett actually came up with Disaster Pants, the [01:09:25] guy from San Francisco CrossFit.

And that was because during the [01:09:30] refining process of the old MCT oils, there was some, I think it was C23, that was left over, that was just [01:09:35] a powerful gastric irritant. Uh, interesting. So it's from these odd chain fats that No one even talks about them, but they're [01:09:40] really important for health. They are really important for health.

And beyond the ferrooptosis research, there is observational [01:09:45] research, which consistently associates higher levels of both odd chain fatty acids, C 15 and C 17, [01:09:50] with better outcomes in terms of, I think, overall length of life. But no one in the longevity space is [01:09:55] talking about odd chain fatty acids.

They're a big deal. And it's interesting to me that a lot of the people in the [01:10:00] longevity space is are taking a lot of supplements for things that just happen to occur in animal [01:10:05] foods. Yeah. Creatine, taurine, vitamin B12. Nobody's doing oxygen fatty acids [01:10:10] yet, but they will. Like, there are so many compounds that have longevity benefits that seem to occur [01:10:15] in animal foods.

You could just eat a steak, guys, I'm saying. Oh, as long as you put some cultured butter on top, [01:10:20] yeah. Make it even more delicious. Talk to me about cheese. Good or bad? I think cheese is great. [01:10:25] A lot of vitamin K2 in cheese. Cheese that is fermented for more than 60 days is allowed to be [01:10:30] sold as raw. Like, you can have a raw cheese in grocery stores.

Cheese that's more than 60 [01:10:35] days old has essentially zero lactose if you're lactose intolerant. And I do think that there is a [01:10:40] benefit to having a calcium phosphorus protein. balance as a human. I think that humans do need [01:10:45] calcium in our diets and balancing all of the phosphorus in your meat with [01:10:50] calcium.

It's probably beneficial. So having some source of calcium is good, whether it's cheese or [01:10:55] bone meal or a dairy, whatever you can tolerate. I think that's, that's good for humans. So. I think cheese is [01:11:00] great. Obviously, American cheese is not real cheese. No. It is just a cheese product. [01:11:05] And there's a couple of other cheese impersonators out there, but I think cheese is great.

It's an indigenous food. I [01:11:10] mean, Parmigiano Reggiano is so treasured in Italy that it's, you cannot make [01:11:15] Parmigiano Reggiano unless it's raw. Same with Pecorino Romano. I've been relatively anti [01:11:20] cheese because so many people are casein sensitive, especially because most cheese is made from A1 [01:11:25] dairy, and I can't even do raw cow cheese.

I turned into [01:11:30] caseomorphic and I just feel like I took a valium on it. Wow, okay. But I handle [01:11:35] A2 from sheep just fine, so I eat a substantial amount of Menchigo and Pecorino, which are raw, [01:11:40] grass fed sheep cheeses. Yeah. And they taste good, especially in salad. I like goat cheese. Yeah, raw [01:11:45] goat cheese. The only salad I would eat, by the way, is a arugula or maybe some lettuce on occasion, but I'm not [01:11:50] a, I'm not a salad nutcase, but I do think the A1, A2 thing is interesting.

You know, if [01:11:55] you don't think you do well with dairy, think about, you know, the, the, the Casey and I Casey Nysiform and [01:12:00] realize that Jersey and Guernsey cows are usually A2, and if you're getting a milk [01:12:05] that is A2, A2, it will say on the label. Yeah, it will. And any goat milk [01:12:10] is all A2 casein, any sheep, any bison, any buffalo, anything but cows.

They're all A2 [01:12:15] casein, but they have other small differences in them. Oh, tell me. I'd have to look at the literature in [01:12:20] it, but they're, they're, they're not identical caseins. Oh, interesting. Yeah, and it would be really [01:12:25] convenient if I could do a raw cow cheese because there's a lot of variety. The other [01:12:30] issue that I think is worth talking about is some of these stinky cheeses.[01:12:35]

They bother me. They give me a headache. Yeah, you have histamine in a lot of cheese. [01:12:40] And you also have, like, roquefortesan, which is the mold toxin from [01:12:45] roquefort cheese. These are not necessarily things you want to eat unless you have a sore throat. A little bit of roquefort [01:12:50] may cure it. In fact, I've seen it happen.

So I would just say, be cautious on the [01:12:55] cheese. Lightly aged, like three or four month Manchego, is probably a [01:13:00] medical food. It actually helps with hot flashes and perimenopause. Interesting, yeah. I [01:13:05] get a headache when I eat blue cheese. Yeah, a lot of people do. Yeah. So just, not all cheese is the same. If you're going to eat cheese, [01:13:10] and you tolerate it, I think raw grass fed is the only way to go.

I agree. [01:13:15] Now, I'm a big longevity guy, major book in the field, working in it for [01:13:20] 25 years, 73 percent the normal speed of aging and gene therapy and all the [01:13:25] things you can do. And when I wrote my longevity book, I found a lot of research [01:13:30] saying about 0. 6 grams of protein per pound of body weight has some [01:13:35] longevity benefits and it was good research.

I've also seen a lot of other research saying one gram [01:13:40] per pound of body weight is what humans should eat. And. There's a group of people who [01:13:45] say, well, it's plant based protein because it doesn't have amino acids in it, even though it's only 30 percent [01:13:50] as effective. Right, right, right. And I've tried both extensively.

And I eat [01:13:55] one gram per pound of body weight religiously of animal protein. I don't count [01:14:00] any plant protein I might accidentally eat because most plant protein is trying to kill me. It's not trying to help me. [01:14:05] Right. So, what do you say to people who say, but Animal protein raises [01:14:10] mTOR. So does exercise. Oh wait, don't carbs raise it way more?

Oh wait, they [01:14:15] do, right? Yeah, they do. Yeah, yeah. So does exercise. I've seen some evidence. [01:14:20] Yeah, definitely exercise raises mTOR. If you look at the studies in human myotubes, [01:14:25] you know, insulin from carbohydrates raises mTOR also. I think that mTOR is not a bad thing. If you've ever [01:14:30] seen someone that has deficient mTOR, they just, it doesn't work.

You know, if you, too much rapamycin is a [01:14:35] horrible thing for humans. You don't want to overdose on rapamycin. So mTOR is not to be feared. [01:14:40] And I think that most of this mTOR fearing has now swung back the other way. And people are [01:14:45] realizing like. There's probably this whole like metformin craze, and maybe the whole rapamycin [01:14:50] craze was overdone, and we shouldn't be doing that stuff.

Don't fear mTOR, mTOR is great. If you want [01:14:55] muscles, which are associated with longevity, if you want hips and bones that are strong and don't break when you go [01:15:00] skiing, or you, you know, you pick up your child, or you accidentally fall on an icy sidewalk, you want mTOR. [01:15:05] You know, if you want to be fertile and have libido, you want mTOR.

Right. You know, you think of a human that has [01:15:10] low mTOR, they basically look like a, PUD, you know, they're just like Bill Gates. They're kind of like Bill Gates [01:15:15] is kind of the meme for low mTOR. Yeah. They're, they're pretty weak and mushy. And if you want to live a long life [01:15:20] like that, you can take it. It's amoeba human amoeba hybrid is like low mTOR.

So I don't worry about, I don't [01:15:25] worry about that at all. I think that that whole conversation was always frustrating for me. I do. I would be [01:15:30] concerned about always having elevated mTOR. So what, what I've [01:15:35] been teaching people for a long time is you can suppress mTOR and the more you suppress it, the higher it will go [01:15:40] afterwards.

It's. So there's some things that suppress mTOR really, really [01:15:45] well. One is intermittent fasting. Another one is coffee. And another one, [01:15:50] counterintuitively, is exercise. During the exercise, it'll push it down. [01:15:55] After the exercise, it springs forth. Goes way up. So the further you compress it, so this would say, In a written [01:16:00] fast, 12 18 hours, it's not that long, have coffee during the fast, and plug Danger [01:16:05] Coffee here, because of minerals.

And then, what do you do next? You exercise, even for 15 minutes, [01:16:10] and then you eat the steak. And maybe some honey, or some fruit, or some rice. Yeah, rock and [01:16:15] roll. Because the insulin is going to raise mTOR, so now all of a sudden you just exercise, and your mTOR levels will spike way [01:16:20] higher than normal. And when you do that, you put on muscle, and I mean, you look like you're [01:16:25] relatively muscular.

What's your body fat now? Ten and a half, the last time I checked it in the DEXA, ten, ten and a [01:16:30] half. Ten and a half. Mine is between 4. 8 and five right now. And it's a little [01:16:35] bit too low. I mean, you can see I'm like a little bit vascular here, right? It's kind of crazy. What [01:16:40] do you think the ideal body fat is?

Well, it's different for men and women. Yeah, of course. You know, I think [01:16:45] that, um, I don't think about body fat for myself. I just eat to [01:16:50] satiety and I exercise when I want to and I surf a lot when I'm in Costa Rica. And this is [01:16:55] where my body gets as a 47 year old. Maybe I'm even less than 10 percent right now.

Who knows? You look like you're less [01:17:00] than 10. And I actually would love to be at seven, and my metabolism is so [01:17:05] fast right now, and it's very hard to gain weight. I tried four cups of rice a day for like six [01:17:10] months. Didn't work. If you get some goat cream, maybe. Maybe I should get some goat creams. I eat a lot [01:17:15] of cheese, a lot of unlimited steak.

If that's where your body wants to be, that's where my [01:17:20] body wants to be. But I think, you know, to answer your question, maybe for men, like 10 [01:17:25] to 12 or 13, you know? Yeah, I think like 7 to 12 is a good [01:17:30] zone. And then women is higher, obviously. It's really hard to even say for women, because [01:17:35] your boob size, it's is really an important variable for a healthy level of body fat.

[01:17:40] And that's genetic, yeah. If you're a D, your percentage of body fat is going to be higher than someone who's an A [01:17:45] cap. There's no moral valuation between the two, but to say this is a healthy level for women [01:17:50] without looking at the breast size and also genetically, if you have really [01:17:55] big hips, some people are just going to store more fat on the butt and thighs.

Do you know what kind of [01:18:00] fat women store on their butts and on their thighs? I feel like you've told me this but I forgot. It's [01:18:05] EPNDHA. Uh huh. And that's probably why evolutionarily that's attractive for [01:18:10] men. Because those women will dump their EPNDHA into the baby. Into the [01:18:15] first baby. That's amazing.

Right. And so this is probably why all these, you know, [01:18:20] memes and all that stuff around having junk in your trunk. It's because of EP and DHA. [01:18:25] For the baby's brain? Yeah, it really is. So, I, I have a hard time when women say [01:18:30] what's the right body fat? Yeah, it makes sense. You almost need to scale it. It's like look in the mirror?

[01:18:35] Yeah. That, that's the right one. I feel like men could do that too, like look in the mirror, you know? Like [01:18:40] Yeah, it's, it's a range. Yeah. Yeah, there's probably some structural differences, but generally guys don't [01:18:45] have man boobs unless you're like I was when I was 30. Shouldn't. No, you shouldn't. And [01:18:50] If that happens, I think there's a narrower range, so the diversity in men is lower, and [01:18:55] for longevity, I do think there's something called a fat age, and if you look at [01:19:00] the amount of liver fat that people have, it goes up linearly with age, [01:19:05] and my liver fat's under 1%.

Which is low for an 18 year old [01:19:10] and that's where you want it to be. And it's because I'm eating animal protein and because I eat the right fats. [01:19:15] I think liver fat is an indication of metabolic health, right? So the reason liver fat goes up as you age is not because [01:19:20] that's normal aging. That's because of the reflection of the rest of the population being metabolically [01:19:25] unhealthy.

We live in a dirty milieu. So all of these, like, it happens as you age, you know, [01:19:30] adages are just baloney. We do, and it's funny, in the tweet, I think after the one you were [01:19:35] talking about from Brian Johnson, he published his stats, which are really, really good, and [01:19:40] probably the worst stat of all of his that he published, although there was no APOB in there but [01:19:45] he, his liver fat was only in the top 25%, it was like 2.

6 [01:19:50] percent or something, so And I'm like, Brian, have some Talo, man. Like, like, add diversity of [01:19:55] the fats you're eating and mechanistically it'll work and just run the experiment for a little while. And I, I worked [01:20:00] on chatting with him about it last time I interviewed him, but he's like, I'd have to have my experts in here on this.

[01:20:05] Because getting the liver fat down is an indicator of aging. And in your dexa, did they tell you your liver [01:20:10] fat? I think it was very low. Yeah. I don't remember the exact number, but it was very low. This is a really important thing for [01:20:15] longevity. I don't doubt it. I think it's a reflection of metabolic health.

The other thing I'll say about Brian [01:20:20] respectfully, because I respect what he's doing. I like Brian, yeah. Is that when you are doing a longevity [01:20:25] protocol and you must supplement with both thyroid hormone and testosterone, you might question [01:20:30] the validity of some of your protocols. Yes. Oh, I don't agree at all.

You don't? Not at all. [01:20:35] Look, your body, as we age, will make less thyroid and less testosterone. [01:20:40] But his testosterone is tanking because he's doing caloric restriction. Is he not taking testosterone now [01:20:45] still? He is taking testosterone because he's tanked at doing caloric restriction. My testosterone was lower than my [01:20:50] mom's when I was 26.

I've been on testosterone all but three years. I went off when I was testing the Bulletproof [01:20:55] Diet. I got my numbers up to 700 if I did everything perfect, which isn't high enough. So I, I [01:21:00] like anyone over 40. If eating right doesn't raise your testosterone, and it won't, because there's [01:21:05] plastic everywhere and fragrances and cologne and all this crap.

So, [01:21:10] you're living in a world where your testosterone will be suppressed by your environment even if you do everything right. So you might as well just [01:21:15] take some testosterone already and then love your life. Yes and no, I think that [01:21:20] His testosterone is low because he's restricting calories. Oh, he also doesn't have any animal protein.

Yeah. We, [01:21:25] we talked about this though. His thyroid is all, he said he's had hypothyroidism since he was a, a young man. [01:21:30] I had, yeah. And that's what Brian said. And, um, you know, if he were not [01:21:35] taking thyroid hormone from a pre existing hypothyroid condition, he would have to take thyroid hormone because [01:21:40] of his caloric restriction.

You're right. In fact, we talked about this at the biohacking conference. The [01:21:45] one you missed, you were supposed to be on stage. I was supposed to be there. You had a good reason you couldn't make it. Yeah, yeah. Yeah. [01:21:50] I was supposed to talk right before Brian, and yeah, it would have been interesting. Damon John filled [01:21:55] in for you.

Thanks, Damon. Sorry, it was a great interview, but I missed you. So, during that [01:22:00] interview, we talked about some of the stuff, and it's really fascinating. He says that he never felt [01:22:05] better than when he was on very, very low calories, and I think that's, of course, all in adrenaline. Yeah. [01:22:10] And being like That's catecholamines.

Yeah, it's catecholamines. And you can tweak those with supplements if you want [01:22:15] to. Like, that's EGCG and You know, some of the other adaptogenic herbs, you can [01:22:20] dial those up or down all you want. You don't have to be on low calories. I agree. I agree that the low [01:22:25] calorie thing is interesting to me. I, I'm not into it.

I'm not into it either, Dave. And you know, the [01:22:30] monkey study between Wisconsin and the NIH was very interesting when they didn't see longevity [01:22:35] benefits in the monkeys that actually ate an evolutionarily consistent diet. And it's kind of begs the question [01:22:40] of, you know, If you're eating garbage foods, maybe restricting your calories is good.

But if you're eating [01:22:45] a, an evolutionarily consistent diet, do we really have strong evidence that caloric restriction extends [01:22:50] lifespan? And then the other asterisk that's interesting for me is that across animal models, [01:22:55] when you restrict calories, you also see decreased polyunsaturation in [01:23:00] membranes. You get membrane remodeling and they become more saturated.

Right. So this polyunsaturated to saturated [01:23:05] ratio in membranes, this hasn't been done in humans, but across other species, I believe Drosophila and others, [01:23:10] you see more saturation in animals that are calorie restricted and that is associated with [01:23:15] longevity. So we're back to the polyunsaturated piece. So there are echoes of this.

You know, [01:23:20] liver fat, pharoptosis, and all of this [01:23:25] that kind of tie together in an interesting way. Did you, I know that you get sent thousands of [01:23:30] books like I do, did you read Superhuman, my longevity book? I did! Thank you. I would have been fine if you said no. [01:23:35] And in it, I reference animal studies because there aren't human ones that show [01:23:40] when you eat a fat, where does it go first?

And the two types of fat in your body [01:23:45] that remodel most quickly from diet are white fat, the subcutaneous fat, and brain fat. Interesting. So [01:23:50] those are the areas that are going to change if you eat a lot of olive oil. The brain is going to shift [01:23:55] about 55 percent of brain is saturated and your body will hold it saturated no [01:24:00] matter what most important it it's dominant and then the amount of six and three [01:24:05] above that is highly variable and your white fat so you start eating french fries all the time your white [01:24:10] fat will immediately change but your cell membranes take two years for 50 percent [01:24:15] of them to change because the half life of fat and cell membranes is something like About 800 [01:24:20] days or thereabouts.

It's a long time, yeah. Yeah. Yeah. And you need four and a half half lives to [01:24:25] fully remodel something, so. That's why for me, 15 plus years of never eating seed oils, [01:24:30] dude, it's working. Like, it's working better than I could ever imagine. But it takes time [01:24:35] for people to understand this, that if you have been eating a diet, and this is maybe why seed oils are so problematic.

[01:24:40] You hinted at this, but I will clarify it. Your body makes saturated fat. Your body [01:24:45] makes monounsaturated fat. De novo lipogenesis. Your body interconverts them. Your body [01:24:50] doesn't make polyunsaturated fat, which means you store all of the omega 3 and omega 6, for better or for [01:24:55] worse. And if you are filling your body with lots of omega 6 linoleic acid, which is the [01:25:00] predominant omega 6 in seed oils, you are stuffing it into your cell membranes, and that takes a long [01:25:05] time to remodel.

And that's just, In the interim in, you know, metaphorically, I've talked about [01:25:10] this as having a house in the mountains of California with a heck of a lot of dry wood [01:25:15] around. All you are waiting for is an oxidative stress fire, and you will have tons and [01:25:20] tons of tinder for that fire to burn up from an oxidative stress.

So that's, it's a dangerous thing to do. You, [01:25:25] and you can remodel out of it, but it doesn't happen overnight. So think about that. Like when you [01:25:30] eat French fries, those French fries kind of stay with you for four to five [01:25:35] years. Yeah. I was just pulling up my phone here because Axo. Health is the [01:25:40] lab testing company that's a part of Upgrade Labs.

And I was looking at my omega check, [01:25:45] even though I only eat tallow and dairy fat and a small amount of olive oil, [01:25:50] my omega check was 11. 8, which is very, very high in the range. But my [01:25:55] ratio of arachidonic to EPA is low at 3. 1. Hmm, [01:26:00] okay. Right? And my omega 6 to omega 3 ratio, which means You [01:26:05] know, you want more omega 3s, less omega 6s, it's 2.

6. And the [01:26:10] longevity people say you want four omega 6s for one omega 3, and typical french [01:26:15] fry eaters and salad dressing eaters are fine. Forty five to one. Right, [01:26:20] so, this diet, over the course of years, has moved my membranes in that direction. And [01:26:25] strangely, even though I don't supplement fish oil very often at all, I might take krill oil once a week.

[01:26:30] My EPA is 3. 4, it's very high. My DPA is very high. My DHA is very high. [01:26:35] Without having to supplement. Just from eating tallow. Well, it's also from the absence of the omega [01:26:40] 6s which share the same enzymes, right? So you know that these omega 3s and the omega 6s have the same [01:26:45] series of elongases and desaturases, this D5D, D6D, and then all of the [01:26:50] elongases that take them down the chain.

When you're eating a lot of omega 6s, these enzymes get [01:26:55] occupied moving the omega 6s down the pathway. There is actually alpha linolenic [01:27:00] acid in tallow. And if you have an unencumbered omega 3 pathway, you can [01:27:05] convert that into EPA and DHA. You can indeed. And DPA. And so, and there's EPA [01:27:10] and DHA occurring naturally, and DPA in animal fats, and any ALA that's [01:27:15] in there, you know, some of that will be converted into the downstream omega 3s.

If you don't. [01:27:20] Gum up the works with a bunch of omega 6s. Apparently I'm evidence of that. Yeah, yeah, I've seen the same thing in my labs [01:27:25] too. I don't supplement with any fish oil. And I don't have deficiencies in omega 3 fatty acids. Do you eat [01:27:30] a lot of fish? I don't eat any fish. I eat sushi on very rare occasions.

And I take chlorella to [01:27:35] bind the mercury. I just like some sushi, but I don't eat as much as I used to. It's kind of full of all the bad stuff [01:27:40] now. It's tragic. It's really tragic. Microplastics, forever chemicals, heavy metals, it's tough. And guys, [01:27:45] Axo, A X O dot health. Check it out, it runs [01:27:50] 600 or so, advanced longevity panel, and you can look at your fatty acids and see if what you're doing [01:27:55] is working.

And the idea is you don't have to get a permission slip to know what's going on, and we recommend [01:28:00] Biohacks for what to do to make that stuff work. Some other numbers that are notable, just think, does this [01:28:05] diet work? Triglycerides of 58, even though I've been eating shit tons of carbs when I did this. [01:28:10] And fat.

And fat. HDL, 75. It's a good number. [01:28:15] VLDL cholesterol, 9. At the very, very low end of the range. Right. Right. These are things [01:28:20] that people would complain about. And my, uh, LDL is [01:28:25] 192, should I be afraid? I wouldn't think. I do not care. I never want to [01:28:30] hear an LDL number or ApoB number without hearing fasting insulin is the second thing someone tells me.[01:28:35]

Exactly. And so I think that fasting insulin and metabolic health is the [01:28:40] context in which all lipids must be interpreted. And I think that there's a [01:28:45] lot of compelling data now that speaks to that. Have you seen Dave Feldman's lean mass hyper responder data? Yes. Yes. This [01:28:50] is very interesting stuff. Really interesting.

We can talk about it. But what's your fasting insulin, Dave? Dave. It is because [01:28:55] I've been literally for a year eating four cups of rice a day to try and get [01:29:00] fat. It was sub optimal, we'll put it that way. So I have since [01:29:05] been, alright, my rice experiment is done. Okay. So I'm not eating any of that stuff right now.

But [01:29:10] interesting that rice affected your fasting insulin. Okay. I think it was for one year, like [01:29:15] every single meal, I'm stuffing my face with rice and honey and watermelon [01:29:20] and intentionally carving up as much as possible. I did not gain a pound. I'm still 5 percent body fat, [01:29:25] but my fasting also went up. My HbA1c went up.

I keep it at 4. 8 to 4. [01:29:30] 7 and it went up to five something. And my CGM showed my fasting [01:29:35] blood sugar was higher than it has been for years. I'm like, all right, I didn't gain weight, which was the goal. [01:29:40] And so I, you know, Just went back off of carbs. So I'll do them once a week like I've been [01:29:45] recommending for years.

But it was an interesting experiment, right? So, the fact that once you get rid of [01:29:50] the seed oils, which I think takes really about 10 years. Couldn't. Well, how can I not get [01:29:55] fat? If, if I would have eaten that 10 years ago, I would have been fat in two weeks. This is crazy, right? [01:30:00] Not all calories. It's all about context.

The recent labs I did, and I eat 2 to 350 [01:30:05] grams of carbohydrates a day. My fasting insulin was 3. 1. It's just, that's [01:30:10] where I live. But let's talk about Dave's study because the AFOB is super interesting. So Dave, [01:30:15] He's not done with it, right? But he has this group of lean mass hyper responders.

These are people who are doing ketogenic [01:30:20] diets. And what's interesting is that there is human physiology that says that people who are [01:30:25] lean doing keto will just use a lot of fat for energy. So they often have massively elevated LDLs. [01:30:30] I'm going to give some numbers off the top of my head. I think they're correct.

It's just from recall. He has about [01:30:35] 70 people in the cohort right now and they've done, they've done the first CTA. So the CT [01:30:40] coronary angiography, very specific for plaque in the arteries. I believe the [01:30:45] average LDL in his group is 273 milligrams per deciliter. And this is the CLEARLY [01:30:50] scan? No, it's not CLEARLY.

It's a CTA. Okay. CLEARLY is a little different than a CTA, but yeah. So he's [01:30:55] done it at the Lundquist Institute. He's working with Matt Budoff, who is a, he's a very well respected cardiac [01:31:00] radiologist. So he's working with a very well respected MD interpreting the scans. And what [01:31:05] was interesting is, even in the first set of data, right, He could see 70 people with an average [01:31:10] LDL of 273 milligrams per deciliter, right?

Some of them have plaque, but what's interesting is he [01:31:15] compared it to a cohort from the Miami heart study and it's a matched cohort. So they found 70 people in the [01:31:20] Miami cohort, same ages, same demographics. Average LDL in that cohort is [01:31:25] 120 milligrams per deciliter, right? So you have 70 people in Dave's cohort, average [01:31:30] LDL 273 milligrams per deciliter, more than twice.

Average LDL in Miami, 123. [01:31:35] There is no statistically significant difference in the plaque score [01:31:40] between the two groups, okay? Number one, piece of data. Crazy, right? Number two, there is [01:31:45] a trend toward less plaque in Dave's group. You mean a high LDL has less plaque? [01:31:50] Less plaque. Not statistically significant, but a trend toward less plaque.

He [01:31:55] secondarily did analyses in his group. There is essentially zero correlation between [01:32:00] LDL and plaque score in his group. Zero Zero correlation between LDL and plaque [01:32:05] score. Like, the R value is zero. It's almost like a flat line, like there's no slope. [01:32:10] It's crazy. I think there's a reason for that. What?

ApoB doesn't cause [01:32:15] atherosclerosis. Oh, so you think it's about ApoB? No I don't. ApoB [01:32:20] doesn't cause atherosclerosis. But it's very well associated with high cause of mortality. High ApoB isn't good for you. [01:32:25] Well, it depends on the context. Okay, tell me more. Well, it's insulin sensitivity, right? In my [01:32:30] opinion.

And so if you're swimming in a pool that is dirty people, right? If you're swimming in a [01:32:35] pool where the majority of people are metabolically unwell, right? We know from multiple studies in the last 10 [01:32:40] years that 86 to 93 percent of the U. S. population has at least one risk factor of insulin sensitivity, metabolic [01:32:45] dysfunction.

86 to 93 percent of our population is on the continuum of insulin [01:32:50] resistance. To some degree, we are swimming in a dirty pond. Of course, ApoB [01:32:55] associates with lower mortality. Because ApoB goes up when you're insulin resistant. ApoB goes up when you're insulin resistant [01:33:00] and in someone who is insulin resistant.

ApoB, I believe, is involved in the cascade [01:33:05] of atherosclerosis, but not causal. Right? So you can be necessary but not [01:33:10] sufficient. This is dry wood. You need wood to make a fire when you're camping, but wood [01:33:15] doesn't cause the fire. Okay. And wood is also valuable for humans, right? Woods can be used to make [01:33:20] a cabin or a shelter or what is used to make things.

So lipids, [01:33:25] ApoB has immunologic roles in the human body. It's an immune, it's an immune molecule. It's [01:33:30] associated with more longevity in people that live to 85. This is the Leiden 85 study. Yes. So in many [01:33:35] studies in the elderly. High levels of LDL are actually associated with lower [01:33:40] morbidity and improved longevity.

So that's what's interesting. But in the interim, yes, [01:33:45] if you, if the majority of the population is insulin resistant, and I think this comes back to the inside of our [01:33:50] arteries. So all of our arteries are high pressure. Our veins are low pressure, [01:33:55] but all of our arteries are at high pressure, which means that when you are circulating blood through the arteries of your heart, [01:34:00] the arteries of your body, you are going to get some denuding of the endothelium, especially at branch points.

It's pretty even. [01:34:05] Everywhere else. When you are metabolically unwell, your immune system is impaired, and you cannot remodel [01:34:10] the inside of those arteries as well. And that, I believe, is the problem. When you don't repair the [01:34:15] little cuts and scrapes and bruises that occur on the inside of all of our arteries, just because we [01:34:20] have a blood pressure of 115 millimeters of mercury, which is quite a lot of pressure in a healthy individual at [01:34:25] systolic heartbeat, you know, If you can't repair that, that is where atherosclerosis [01:34:30] starts, I believe.

Now, if there's more LDL, there's more LDL moving there. That doesn't mean the LDL [01:34:35] caused it, because the LDL doesn't injure the endothelium. It does not. I don't believe there's any evidence that [01:34:40] native LDL injures the endothelium, and therein lies the problem. So it's, the question is, [01:34:45] if we are teaching humans how to live long, Do we tell them to lower ApoB or do [01:34:50] we say don't be insulin resistant, right?

What is the real problem here? And if we're telling them to [01:34:55] lower ApoB, how are we telling them to do that? Because, you know, you certainly don't eat tallow if you want to [01:35:00] lower ApoB, but we talked about all the benefits of eating animal fats earlier. So there's a, it really, [01:35:05] all of it has to make sense if we're going to have a cohesive paradigm of how humans are meant to live.

[01:35:10] And I think that when you try to lower ApoB, whether it's through a PCSK9 inhibitor, a statin, [01:35:15] you know, limiting your saturated fat, you can certainly decrease your cardiovascular mortality by [01:35:20] lowering ApoB. Will you lower your all cause mortality? That is much more questionable. [01:35:25] And I think that the data that you will lower your all cause mortality by lowering ApoB is very [01:35:30] limited, if not even present, because you will shift it to something else.

Like cancer [01:35:35] or dementia or something else, right? Some sort of immune thing. So that is the [01:35:40] real honest conversation we have to have. And I think, I think there's been a little bit of over emphasis on cardiovascular [01:35:45] disease here. Understandably, it's scary to die of a heart attack, but does the data really [01:35:50] say that you will live longer if you lower ApoB?

I don't think so. I think that the data where the [01:35:55] money is, is you're going to live longer if you are insulin resistant, if you're insulin sensitive, right? That is [01:36:00] guaranteed. And that's liver fat, right? But that's not the conversation, Dave. The conversation is [01:36:05] lower your ApoB. So what do you say to people who have high levels of insulin [01:36:10] sensitivity and low liver fat and high ApoB?

Wouldn't a PCSK inhibitor be a good idea? Oh, no. [01:36:15] Why not? Oh, no. Because of the side effects of a PCSK9 inhibitor. What's the problem having high levels of ApoB [01:36:20] if you're insulin sensitive and you have low liver fat? What's the issue there? Why would you want to lower your ApoB? Then [01:36:25] you're going to have all the potential problems of a PCSK9 inhibitor.

And if you look at the Mendelian randomizations of [01:36:30] PCSK9, polymorphisms, there are potential problems associated with inhibiting PCSK9. [01:36:35] There's really nothing wasted in the human body. I think we like to think in pharmacy or in medicine [01:36:40] that we can just knock something out. You know, the PCSK9 drug is a monoclonal antibody.

You don't need your [01:36:45] PCSK9. You can just get rid of that. It's not going to do anything in your body. Just like you don't need your HMG CoA reductase. You don't [01:36:50] need to make cholesterol. It's vestigial, Dave. It nevermind that it's a precursor for your sex [01:36:55] hormones and all of the membranes of your body and all of the downstream things that happen from [01:37:00] cholesterol, including squalene.

You can just, you can just, it's vestigial. You don't need, [01:37:05] you don't need HMG CoA reductase, you know, you can just knock that out with a statin. It's just like, to [01:37:10] me, this is, this is just this is sort of like prideful, you know, [01:37:15] prideful ignorance of human physiology. We're just, we're too quick to assume that there are not going to be [01:37:20] any long term side effects of knocking out PCSK9.

So I think, yeah, if you, if your ApoB is quote [01:37:25] high and yours probably is, if your LDL is 192, but if you're insulin sensitive, I would [01:37:30] argue there's a. more nuanced conversation here. And we cannot clearly say that you will [01:37:35] increase your longevity from all cause more, you know, that you will avoid. Yeah.

Right. And it's like, it makes sense what you, [01:37:40] what you just want to live well for a long time, right? We're not just like heart disease isn't the only thing that kills [01:37:45] people. Not at all. It's one of the four strokes, dementia, cancers. Do you look at the ratio of [01:37:50] APOB to APOA? Yeah. I mean, it's an indication of metabolic health, right?

Same kind of [01:37:55] thing. Triglycerides. All these ratios are interesting. And I think they start to [01:38:00] overcomplicate things. Just look at your fasting insulin. Yeah. You know, it'll tell you 85 percent of what you [01:38:05] want to know. People get really granular. And for what it's worth, I think my ApoB [01:38:10] is 110. Yeah. Much lower than it used to be when I was strictly [01:38:15] carnivore.

So once I started eating carbs. My cholesterol comes way down. My ApoB is still higher [01:38:20] than many would quote like it. Yep. And I just don't see in the literature there's a clear [01:38:25] signal that that's going to decrease my longevity. And as we talked about, ApoB containing lipoproteins have [01:38:30] benefits in the human body.

They're not just there to kill us, guys. And I strongly object to the [01:38:35] notion that they're vestigial or that they, I mean, I've heard discussions online of people [01:38:40] saying ApoB is vestigial we now have antibiotics, ApoB was there to protect us from [01:38:45] infections. It's still there to protect us from infections in some way.

It does interrupt quorum sensing between [01:38:50] bacteria and other pathogens in our bloodstream, almost certainly. And [01:38:55] oh, we have antibiotics now. We don't need as much ApoB. I don't buy it. I don't buy it. And [01:39:00] I, I fear that when we lower ApoB longterm, we will, we will see signals of [01:39:05] increased cancer, impaired immune surveillance, increased dementia and other issues in humans.

So like, let your body [01:39:10] do what it wants to do, but be metabolically healthy. That is really profound [01:39:15] advice. There's something else I've, I've been talking about for years that I included in the Axo. [01:39:20] Health lab test panel and it's, it was expensive to do it. But. It's LP [01:39:25] PLA2. That's an interesting one. And like, if you're worried about cholesterol, or worried about APOB, the [01:39:30] lining of the arteries will release LP PLA2, which is a sign [01:39:35] it's being damaged.

So if there is damage of any cause, That's gonna go up. So [01:39:40] that means if that number is where it should be, and mine's very low, then it means whatever my scores [01:39:45] are with cholesterol, they don't matter. Do you agree with that? I think LPPLA2 is really [01:39:50] interesting. So lipoprotein associated phospholipase A2, it goes up when you give people soybean oil.

There's a [01:39:55] trial What damages your arteries, that would be wild. There's a trial in humans that shows this and Brian [01:40:00] Johnson didn't put that in his tweet. You know? Brian's experimenting with a lot of stuff. He's gonna come around. I [01:40:05] will bet you money that there will be a time when Brian has ghee and or tallow as a [01:40:10] part of his program.

I look forward to it. He takes collagen now. Well, he's taking it the whole time. Yeah, yeah. He's like, I'm vegan, [01:40:15] but I eat collagen. Like, I made collagen a billion dollar industry. I know why we take it for longevity. And this is [01:40:20] important. I don't know if you've seen this. 20 grams of collagen is the right amount.

And [01:40:25] more than that will drive oxalate formation in the body. It does, because of the breakdown, yeah. Yeah. So there's [01:40:30] a, there's probably a sweet spot. Yeah. So, having none isn't a good idea, and it is a signaling molecule like [01:40:35] those organs that you make. Yeah. Collagen, when you take it, signals to your [01:40:40] body that there's been damage to your collagen.

So then your body regenerates your collagen, even though it wasn't your [01:40:45] collagen that was damaged. That's why hydrolyzed collagen is interesting. So, and I know Brian's about to launch his collagen [01:40:50] brand, which I'm like, go for it, Brian. That's, that's rich. But it's cool. It's like, there's [01:40:55] one animal food, and there's no reason not to add, like, a healthier mix of lipids.

And I'm, [01:41:00] you know, I'm on the same longevity journey, and I want everyone who's interested in [01:41:05] longevity, like, get your labs. And, you know, personalize your protocol and look at the stuff we just talked about. [01:41:10] So Paul, you really know what you're talking about. I always love the stuff you share online. [01:41:15] Uh, we've, we've had similar perspectives during the dark four years when [01:41:20] the Fauci overlord ruled our freedoms.

I think I can say that without any censorship. [01:41:25] I think you can now. And congratulations on your new film as well. Thank you, brother. I hope people will check it out. It's just a [01:41:30] little mini documentary on seed oils and it's good talking to you always, my friend. Okay, one more thing before we end [01:41:35] this. You gonna be at the biohacking conference this coming year?

I hope so! [01:41:40] Biohackingconference. com, guys. And, just uh, your tallow is Lineage? [01:41:45] Lineageprovisions. com. We also make beef sticks, we make air dried steak, and hardened soil. Yeah, we [01:41:50] make all kinds of stuff in Lineage. Beef sticks, air dried tallow, I mean air dried steak, we have a [01:41:55] protein powder. Full, full, full wraparound stuff there.

One more question for you. Histamine and [01:42:00] dried meat products. What are you doing to control it? You know, it doesn't bother me. Okay. You know, they're air [01:42:05] dried. So it's tried at like 78 degrees for five days. We don't cook [01:42:10] it. Do you put apple cider vinegar on it or something to stop microbial fermentation?

The [01:42:15] air dried steak has apple cider vinegar. I'll be curious what you think of that. I'll give it a try. It's an organic apple cider vinegar. [01:42:20] And, um, we have the beef sticks. Okay. So I don't have issues with it from a histamine perspective. [01:42:25] I will be curious to hear. I feel histamine pretty well. Let me know what you think of it.

Got some genetics for that. So [01:42:30] I'll, I'll give those a try. I can't wait because you're the only person I know who's making [01:42:35] meat sticks at scale without lectins. So there's no paprika. There's no chili powder. [01:42:40] There's no celery, black pepper. It's what you want to eat. Yeah. And that's, that, that was why it was [01:42:45] cool to do it.

You know, I wanted something that I would eat and I'm really proud of it. Both of them. They're really good. I [01:42:50] can tell you, you did your research. Cause you know what you're talking. We tried. Yeah. We tried really [01:42:55] hard. Awesome. Thanks guys. See you next time on the human upgrade [01:43:00] podcast.