Meat Myths: Truth, Lies and Flawed Science – Autumn Smith – #950

Dave Asprey:

You're listening to The Human Upgrade with Dave Asprey, and today we are going to talk about meat because it's good for you and because fake meat is bad for you. There, that was a whole episode. Okay, maybe there's a little bit more to it than that. We're going to talk about, really, honestly why I was a raw vegan. We're going to talk about what negative things happened to me as a result of that very, very early, that was around 2004 actually when I did that, why it harmed me, why it is harming huge numbers of people, especially young people who don't feel the deficiencies as soon as it would even if they were 30, and what protein does to you and why different proteins are not the same.

It's like I'm on a solid diet, which means I eat bricks all the time, right? But, no. Different proteins do different things, and plant-based protein doesn't mean anything. Even animal-based protein doesn't mean anything because I promise you it's not an animal-based protein and you don't want to eat that, right? It's meaningless. So, we're going to teach you some real serious things about it, including the environmental effect of grass-fed meat and what it does for regenerative agriculture.

This episode will be what you pay for people who try to tell you that they're going plant-based for their health or for their environment. There is not an argument from either perspective for doing that. We're just going to go through the science and explain why the only other reason, which is for spiritual reasons, is almost always an eating disorder or trauma, and possibly actually real.

Our guest today is laughing already.

Autumn Smith:

It's going to be good.

Dave:

She's only seasonally funny because her name is Autumn Smith. I make really stupid and really elegant dad jokes when I drink Danger Coffee. I can't help it. It's because my brain works better. I can't even tell you all the bad things I'm going to say.

Autumn Smith:

I'm used to-

Dave:

That's awesome. I also have been traveling for, I think, 12 time zones over the last three days. So, there's that, but I'm feeling awesome.

The reason Autumn's on the show is back about the time that I was launching Bulletproof, she and her husband, Chas, launched Paleovalley, which is all about grass fed everything. They even have a regenerative meat delivery service called Wild Pastures. She also has a podcast called Optimize Paleo where, believe it or not, I was the second guest ever back before she blew up and became a big deal.

So, these are my people, my kind of people. I also, in case you guys didn't hear any of the other or hundreds of episodes, I live on and help to run a regenerative farm called Asbury farms and I grow my own meat. The reason I do that is not because I'm a crazy picky son of a bitch, it's because you actually live longer and feel better, and I think it's morally beneficial to build soil for the planet and to not mistreat animals and all that kind of stuff.

So, Autumn has spent as much time as I have on coffee and butter on meat, and she's going to teach us some things about meat. So, tell me about the history of Americans and meat. Why do we even think anything about meat versus bread? Why is bread supposed to be good for you?

Autumn Smith:

Yeah. It's fascinating, because this message is so loud that meat is harmful, you'd think it was based on evolution or maybe sound science, but it actually has its roots in religion and ideology and in business and in some flawed science.

There's always been this spiritual belief that meat wasn't clean or holy, but Seventh Day Adventist Ellen G. White, she actually founded the Seventh Day Adventist Church, she had visions from God that told her a clean and holy diet. The Garden of Eden diet was full of fruit and vegetables and whole grains and little, if any, meat. She also believed meat was a stimulant that aroused sexual desire and would cause kids to masturbate. One of her students, Dr. John Harvey Kellogg, decided to create alternatives. He created the cereal industry Kellogg's foods.

Dave:

So these guys were talking to the same, we'll say, the same angel who was masquerading as a good guy but probably wasn't, who were whispering, "Stop eating meat. New to yourself with your diet," and that's who trained Dr. Kellogg. Tell me more about cornflakes.

Autumn Smith:

Yeah, so cornflakes, he was so inspired and passionate about this mission because Ellen G. White taught that, basically, masturbating was akin to shooting yourself in the heart and it was just a deadly, deadly sin. So, he created up to 30 patents for cornflake cereal, also created the first meat alternative-

Dave:

She needs an anatomy lesson because it's hard to shoot yourself in the heart that way.

Autumn Smith:

Yeah.

Dave:

I'm trying to figure that out. Anyway, that's not how biology works either. Okay.

Autumn Smith:

Yeah, those were her teachings, so he was very heavily influenced by that. That's just where a lot of our process cereals and our first official meat alternative was produced. Also, Seventh Day Adventist have a big hand in the Dieticians Association. They own a lot of hospitals in the country and they have some sway in our dietary guidelines. I know not all religious people believe this, but they definitely do and they seem to wield some power.

Dave:

I actually know some really healthy Seventh Day Adventists, to be super clear. It's not like it's never been done, but they're mostly vegetarian, right? They don't have to be vegan or...

Autumn Smith:

Yeah, I don't think they have to be vegan. No. I think little meat is also acceptable.

Dave:

You can pull off vegetarianism. I don't think it's as good as eating some collagen and some grass-fed meat, but at least you're getting grass-fed animal fat in the form of dairy protein. That's what they do in India. This whole vegan thing is like, whoa. Okay, so we have religious Cultus who taught us that brown bread and all sorts of other things are somehow better for us than what royalty and kings have been eating for a very long time which is fish and meat. So, we had the nice religious side and then we had the anti-sex side. It seems like the US is trash from a puritanical perspective. Wow.

Autumn Smith:

We're screwed. Yeah. Definitely. Definitely. There are other interesting influences as well, but that's definitely been-

Dave:

I'm just going to say, crazy people trying to tell us not to eat meat for no good reason. Like, because sex and masturbation is bad. Okay, that's wrong. That's nourishing for humans. That's what sex is, just like me.

Then one group, the old group, was channeled from an angel who said to eat whatever the heck Adam and Eve ate. And then the other one, more recently, we have 1970s nutritionists saying fiber, ignoring everything else. And then we have the most recent I downloaded from angels that if you eat a meal every two hours a day, like the 1970 doctors, you won't die, despite all the evidence to the contrary.

So, what happened over the past 30 years with red meat consumption? Because they said red and processed meat as if they're the same things. Like if I was to say wine and cyanide together are bad for you, but which one was it? Anyway. So, what happened to our meat consumption over the last few years? Did it work?

Autumn Smith:

That's what's fascinating. When you look at the data, there was a recent 2022 analysis. Between 1800 and 2019, processed foods went from below 5% to above 60%. I think everybody knows that. Red meat consumption declined by 44%, butter declined by 68%, lard declined, dairy and cream fat declined. So, all these-

Dave:

That's why heart disease has been going down, right?

Autumn Smith:

Right. Exactly. Yeah, exactly. It has an inverse relationship with heart disease, so-

Dave:

Everyone lost weight.

Autumn Smith:

... it really doesn't make sense.

Dave:

Yeah. Everyone lost weight because we ate less red meat and everyone's less obese now than all of human history. The government was right.

Autumn Smith:

Perfect. Yeah, exactly. Yeah, we're just missing something there. Sugar, refined carbohydrates, processed vegetable oils, these are all increasing precipitously. Meanwhile, red meat [inaudible 00:09:06].

Dave:

Meanwhile, it didn't work. We ate 44% less meat, we ate 50% less milk-

Autumn Smith:

Red meat.

Dave:

Red meat specifically. Fifty percent less milk, although I would argue milk protein is probably not that good for you except in some circumstances, 78% less animal fat, 68% less butter and magically replace it with shitty oils. Pretty good summary?

Autumn Smith:

Yeah, cooking oils actually increased by 329% during that period. So, yeah, that's a great summary. It's really sad that more people don't understand.

Dave:

Okay. Grass-fed meat, which is what you've been focusing on, it's at the core of how I healed from the damage I did as a vegan. It's at the core of the Bulletproof Diet. People lost millions of pounds on that, which is different than paleo, which is in the same quadrant of the map, though. There's just some other stuff around avoiding certain veggies. There's protein, there's all kinds of proteins, but there's also fat. If you had to say, all right, which is more important for you when you eat a grass-fed animal, is it that grass-fed animal protein or the grass-fed animal fat?

Autumn Smith:

I think they're both very important. Because we're all eating so many poor quality fats, I'd say the fat's very important, but we're also metabolically broken. Two out of 10 of us are metabolically healthy, so the protein's going to be equally as important. So, I don't know. I don't know. What do you think?

Dave:

Well, I think the fat's more important, but where does mother nature give you pure protein with no fat? Oh, nowhere. That's because the things that make the most protein always have animal fats as part of their cell membranes minimally, and usually with some fat stored in the middle. So, you don't digest

protein well without a little bit of fat. So, the idea of a supplement that's just protein and nothing else is a relative recent invention of the food industry probably because they're selling the fat somewhere else for more money.

Autumn Smith:

Yeah. Absolutely.

Dave:

Like pea protein.

Autumn Smith:

Like [inaudible 00:11:15].

Dave:

Yeah, exactly. "Let's take that fat out, someone might masturbate. We'll use it for someone else." It's sick and wrong. All right, let's assume that you need protein and you need the kinds of fat in grass-fed animal that are different than corn-fed animal and different than corn itself. Let's talk about just protein from grass-fed animals and what the benefits of that protein are, and then we'll talk maybe some more about the fat. Because, like I said, they're inseparable the way it normally comes.

So, talk to me about protein quality. What is protein quality measured with and where does red meat fall there?

Autumn Smith:

Red meat is a very high-quality protein. Because we are not eating for protein necessarily, as I'm sure a lot of your listeners understand, we're eating for amino acids. There's 20 amino acids, nine of which are absolutely essential that we get from our diet. Animal source proteins are complete proteins and vegetable source proteins are not complete proteins. They're often missing lysine, methionine, cystine, all these other amino acids. You can combine them, yes, but it takes more calories. It's not that convenient.

When we look at quality, like the digestible, indispensable amino acid score, you'll see animal proteins are far higher, sometimes two times as high on the scale of quality as our vegetable-based sources. You've done a good job of teaching people why, right? Vegetables and fruits have other things in them that can inhibit absorption and they, again, don't contain all of those amino acids in the ratios that we need necessarily for proper protein synthesis.

Dave:

One of the things they taught me in seventh grade when I was getting really chunky was rice and beans is a protein. They actually taught that. The fact that there are complete amino acids in it. They forgot to tell you it has four times as many calories as an equivalent amount of meat. So, yeah, I'm going to get all my protein that I need, but literally you are going to have a bloated stomach like the pregnant man icon that they now have, which is like dad bod icon. It's very confusing and I'm triggered by that. But, what the heck?

If you eat rice and beans for that, you are going to look really different after the meal. If you do it for a long time, you're going to look really different all the time. If you don't believe me, let's combine

that with corn oil and vegetable oil and then let's look at what's happening in Mexico right now and in much of South America.

There is a huge problem with obesity and with diabetes that's even worse than in North America. Even though people move around a lot more on average in Mexico than they do here, but they're eating less red meat because it's expensive. They're eating traditional rice and beans, which have protein, but they're putting bad fats on it instead of good fats like manteca, which is lard.

Yes, if you guys are wondering why I know that means lard, because I lived in a town called Manteca when I moved to California. A little bit of trivia, it was named by a white guy who thought he was naming it sweet cream, which is mantequilla. There you go, I lived in lard, literally. I went to lard High.

Autumn Smith:

And you felt great?

Dave:

Yeah, if only they would've fed me that and my chicken nuggets at lunch, I tell you. So, back to reality, rice and beans is not a protein just because it has complete amino acids. Let's assume that somehow you could extract all that stuff from rice and beans and throw away all the carbs and all the lectins and all the antinutrients, all the phytic acid that sucks minerals out of your body, and you didn't even have to fart when you're done with it, you'd have a handful of powdery amino acids when you were done and you'd have done a lot of processing.

If you took those plant-based aminos apart from all the other plant-based nonsense, would they be the equivalent of meat or would the ratios be different?

If you took those plant-based aminos apart from all the other plant-based nonsense, would they be the equivalent of meat or would the ratios be different?

Autumn Smith:

No, the ratios would absolutely be different, and then they would be missing a lot of the cofactors too that are in whole foods and the synergy that help things be utilized in the proper way in the body. So, no, plant-based protein powders are not going to be the same as a grass-fed steak. They're also going to contain additives and they're going to have, maybe, exposures to heavy metals.

No, I just think it's silly for us to assume that they can perform the same way in the body just because they contain the same source or the same amino acids even though they won't be in the proper ratios and they'll have a number of other additives and they won't have synergy on their side at all.

Dave:

What if it looks and tastes just like meat? Ten it should do the same thing in your body as meat, right?

Autumn Smith:

No. No. You know what, they just did some research, Dr. van Vliet. Do you know Dr. [Stephan] van Vliet?

Dave:

I don't think so.

Autumn Smith:

Okay, he's this really cool researcher. He does a lot of metabolomics, and they just analyzed plant-based burger versus a grass-fed beef burger. I think something like 90% of the metabolites into the two products were completely different. Their research concluded, not that one is better than the other necessarily, but that there are clearly demonstrable differences between plant-based burgers and grass-fed meat.

Dave:

All right. We've got to talk more about digestible aminos, but when we get there. What about saving the earth? In fact, I just saw a headline that it's a survival thing. We have to do it. Everyone has to go vegan right now to save the planet. What's your take on that?

Autumn Smith:

Oh. Well, they've actually done that thought experiment. I think her name was Robin White and Mary Beth Hall. They looked at if 300 million Americans went vegan for a year what would the reduction be in emissions, and they came up with a 2.6% reduction and then there would be heavy nutrient deficiencies and we'd eat, I think, 10 times more grain.

Let's be honest, 100% of people are never going to go vegan. And so, if we bring that down to 10%, which maybe happens, that's a 0.26% reduction in emissions, which is not even measurable. And then we have to realize that these emissions that we are being attributed to animal agriculture are very misleading, the statistics they're using.

Dr. Frank Mitloehner, he's at UC Davis, has actually shown that... Yes, I'm sure you're familiar, 2% of emissions are related to cows, and I think crop agriculture was more around a 4.6 and livestocks was about 3.9. So, crops were actually more responsible for emissions than were animal products, and beef was a measly 2%. Not that's nothing. Of course, we can work on that. We're going to talk about how to work on that.

Dave:

Don't you know that all those crops are raised to feed the cows because cows need grain and corn and soy?

Autumn Smith:

No, because his research also shows, I think 85% of what cows are eating, well of all animals, are eating are things that humans aren't eating. So 16% is things that humans are eating, but most of those are going into chickens and pork. Not that that's inexcusable, but still where they're eating food stuffs that humans won't. So, no, these are very overblown statistics. They're not even accurate.

Dave:

So, cows and sheep are actually these amazing biotechnology marvels with a little bit of AI built in that can convert inedible things into edible things, right? We should definitely ban them. Yeah.

Autumn Smith:

I know. They are the problem, right? And the elephant in the room-

Dave:

Heaven forbid, I can't even turn them into food because that's wrong.

Autumn Smith:

It doesn't make sense, right? Especially with coal, oil and gas, the elephant in the room, is we're burning fossil fuels and that's creating a lot of emissions. But the cool thing about regenerative agriculture is we've all been managing against emissions. I think that's important, but we're not managing for the sequestration of greenhouse gasses, carbon specifically. I think that's the bigger problem and that's something regenerative agriculture can do.

Dave:

I am all about pulling excess carbon out of the air because I think it's actually a problem. I'm not convinced that it's caused by mankind, although it might be. I am 100% convinced that it's not caused by grass-fed cows because I know that they're carbon negative and it's not that hard to do. But because I'm worried about the problem or, let's say, paying attention to the problem, worry is probably overbearing, some people may have heard of Elon Musk's $100 million carbon capture XPRIZE where he agreed that the first research group that could capture carbon at scale for, I think it was net negative carbon usage, that he would give them a $100 million.

What a lot of people don't know is that for an XPRIZE to be real, it needs a half a million dollars and it needs a prize committee. The first $50,000 that went into the carbon capture XPRIZE and the big speech that got it added to the list was me, like wait in the day, because I've been a sponsor of the XPRIZE nonprofit. I think it's a scalable way to bring technology out.

So, I believe in all ways of improving our planet. We can manage this on a planetary scale, but honestly the people who should win the $100 million carbon capture XPRIZE are people who can scale grass-fed cattle farming so we take over the golf courses. If we would just do that, we would meaningfully improve the quality of the soil and the quality of our air and the quality of our communities. It's not even as hard as you might think. No giga scale carbon vacuum cleaners required, but I like those two.

Autumn Smith:

Totally. I think it's going to take a number of solutions, like you said. All around the world, there's a billion acres of deserted farmland too. So. like you said, there's just a lot of opportunities. We can do golf courses, we can do whatever, we can do parks, we can do abandoned farmland. There's a lot of opportunity.

Dave:

There's a question from the Upgrade Collective that I hadn't considered, but it's an important one.

You've seen all people saying, "But cows fart and they make methane, and methane is a greenhouse gas." Has anyone measured how much humans fart when they eat grains instead of meat and how much methane they produce? Because the vegans I know, man, they have babies after they eat. They get all bloated. I know I was one of them. Good thing they don't smell, but it turns out being vegan just turns off your smell receptors. Because vegans, they do smell. We can tell.

Autumn Smith:

That's so funny. We know that in grain-finished cows, they emit less methane because they're not eating as much fiber. So, I think this is good argument. I think somebody should do this experiment. I don't know if anyone has, but I would hypothesize that vegans would emit more methane, for sure.

Dave:

Well, there we go. Also, now, I'm going to say this for real, the mineral depletion that is caused by eating all these grains that used phytic acid and to some extent oxalic acid to take minerals out of your body, which is why Kellogg and Graham liked them so much, they reduce zinc and all to reduce testosterone, they put you in the hospital. Steve Jobs, pancreatic cancer, Ornish diet, zero fat. That stuff is real.

You have to account for yourself the carbon footprint of choosing to malnourish yourself with the plants-only diet. Now, eating some herbs, eating the right plants and eating grass-fed animal protein is good for you. But if you're on the French fry diet or I only eat plants because I don't know, God told me that's all I should eat, look, you are going to end up with way more medical problems, and those are consuming plastic at a stupidly high rate.

If you can stay out of the hospital by eating steak, which is totally provably going to happen if you're eating the right steak, not burning it, not doing all the stupid crap like turning it into slim gyms by adding MSG and stuff, you got to calculate your whole carbon footprint. That said, you can make grass fed healthy, portable snacks, like your Paleovalley stuff. My kids love it because it's grass-fed meat that's got only good stuff in it. You can eat that.

When you travel, you don't have to spend money and eat those weird trays they're trying to feed me, like, here we have a gluten-free sandwich every two hours for your eight-hour flight." I'm like, "Let me sleep. I don't eat your crap." Why are you getting there anyway? If I did, I would eat a Paleovalley stick or I'd have some coffee. You can do this around the place... It's all munched up when you look at it, but you have to look into the full systems cost of your life. If you end your life unable to think because you got Alzheimer's, because you had no mineral, because you ate fake food, your last 20 years of care come out of your environmental budget. No one talks about that.

Autumn Smith:

That's absolutely 100% true. The best thing we can do for our planet is to stay healthy ourselves.

Dave:

There you go. All right, talk to me about nutrient density. This is one of my favorite word. What is nutrient density? How do you think about it? Let's make fun of it and use it at the same time.

Autumn Smith:

I love that. Okay, yes. So, nutrient density. Historically we are looking at amount of nutrients divided by calories. A lot of these rating systems will leave out animal-based nutrients, and so it looks like plants and vegetables are higher; or they might demonize a food for caloric content, which we actually need calories, so that's silly; or saturated fat content, which we now know is not as big an issue.

When you upgrade the nutrient density rating systems, you'll see across the board animal products are at the top. Things like oysters and organ meats are definitely high at the top of the list and beef. Then you'll see plant foods here. They're in the middle. They're on the bottom. And then grains as well. And so, nutrient density is one piece of the puzzle and animal products are definitely higher in that.

Then there's the bioavailability piece too, which animal foods just have nutrients in a more bioavailable way like you've taught us so well. We have these antinutrients in vegetables that inhibit that absorption. For instance, with heme iron, beef or meat-based iron is between 15% and 35% absorbable and plant-based non-heme iron is between two and 20. Just because it says it on the label, it doesn't mean that's what you're going to absorb necessarily due to these other plants, proteins or inhibitors, but then also due to your gut health and your age and other factors as well.

Dave:

When you're looking at nutrient density, you could say calories are bad so I want lots of nutrients and low calories. That's kind of easy. You take a vitamin capsule and you pour it into a glass of water which is really big but has no calories or, for that matter, you pour into a Diet Coke. It doesn't really matter because you can ignore all the bad stuff in there. In fact, you could also add a couple lead sinkers and a squirt of mercury in there. No problem. You could even add a high dose of your favorite STI. You just squirt it right in there. It doesn't matter because all that matters is that there's no calories and you could drink this horrifying concoction and, woohoo, nutrients.

Maybe that was dumb, but this is the basis of aggregate nutrient density index. They believe, seriously, that nothing matters except reducing calories and having some nutrients. When in reality, no one, including me when I tried really hard as a raw vegan, can get enough energy from kale or broccoli, especially raw.

I had bowls bigger than my head. I would finely dice it and chop it and blend it and add olive the oil and all the other crap and sprout it and soaked everything's and you're constantly hungry because you can't even get enough energy in because it's mostly fiber, which has no energy, and it's mostly water.

So, the real way to measure nutrient density is per volume of food. And then you realize that a cup of raw broccoli is not nutrient dense at all, it's mostly water. A cup of beef liver is actually too much nutrient density for you. It's just too much nutrients. You should probably eat less than a full cup of liver, plus liver is gross. So, it takes some liver capsules already, that's fine. But this is how to think about food. To say calories are bad for you, Autumn, what do calories measure?

Autumn Smith:

Energy.

Dave:

Would you like to be low energy or high energy today?

Autumn Smith:

High energy. Every day.

Dave:

Oh my God, you have to do that. Well, no energy. That's how to do it. I said so because I'm against masturbation. Oh sorry, I was channeling Dr. Kellogg. Thank you. Okay, [inaudible 00:28:13] tell them. It must be true. I'm just telling you. By the way, I have friends who channel and they're awesome. They really know how to do it, so I'm not saying channeling is fake. I'm just saying Dr. Kellogg was full of shit.

Autumn Smith:

[inaudible 00:28:24].

Dave:

Literally. He was a vegan.

Autumn Smith:

I'd agree.

Dave:

He just [inaudible 00:28:26], right? It was all that fiber.

Autumn Smith:

And methane.

Dave:

And methane. All right, I'm having too much fun with this because this is my favorite topic because I got so sick when I was vegan and because I was intentionally trying to do it to be healthy. When someone tricks you to drink diet soda to lose weight, knowing it makes you obese. So then, you just drink more diet soda. Or the vegans do the same thing, they go, ha ha, we're actually traumatized so we're going to tell you not to eat meat. We're going to tell you it's good for you knowing it'll make you sick, so you'll eat more non-meat. It's like these weird sick perverse little things going on. I don't get it.

In order to eat a steak, do you have to vote Republican?

Autumn Smith:

No. Absolutely not. That's regenerative agriculture, is bringing those worlds together.

Dave:

[inaudible 00:29:20], right? It ruin the whole party system. That's one of the problems having the grass bag. It's like, I want to put on my cowboy hat and get on my 50 cow and then I can eat a good red-blooded steak. But then, I can be regenerative. If you're regenerative, apparently you just have to eat those cattails because apparently there's something edible in the middle and then you're like low testosterone. It doesn't work.

Bottom line is it's an apolitical thing, regenerative ag. It isn't red or blue and you can't put it into tribes. It's either I care about my own medical and health sovereignty and I care about the world I live in because it matters, or I don't. You can't put that in a party. I want to make that really clear. You can try and put it... Also, you don't have to support a certain sports team or believe that one country in a conflict is right versus another. Dude, you get to feel good or you get to not feel good. You get to create a world where your kids can have kids or they can't have kids. That's all this is about. Anyone who tries to put you in a group about this is misguided.

That said, you and I both know a lot of really goodhearted vegans. Are we 90% aligned with what they want for the planet? Yes. It's just a false assumption that it's going to be good for you or the planet. It is not real. That's not how it works. All right-

Autumn Smith:

But I couldn't be more... Yeah, I do feel the same way. I love a lot of vegans and I love their heart and I share their heart in a lot of ways.

Dave:

I do too, right? I've spoken at David Wolfe's big vegan conference. I'm like, "Guys, I'm a lacto-ovo-beefo-porko vegetarian. I hope we can be friends."

Autumn Smith:

Do they accept you?

Dave:

They actually did. I came back the next year and two-thirds of them were adding ghee from grass-fed cows to their formerly vegan diets. David now sells ghee. I gave a talk about how-

Autumn Smith:

Wow.

Dave:

... ghee helps you unlock your vegetables. So, these are people who want to be healthy and they care about animals in the planet the same way I do. I don't eat industrial meat because it's evil, but I eat my own meat. I know because I looked it in the eye before we killed it and I ate it. I thanked it and it thanked me. It was an energetic exchange that was valuable and it was sacred and it was completely in integrity. Anyone who says it wasn't seriously needs to do EMDR and get a therapist because that is how the world works. It is a sacred connection between humans and animals that has existed for many thousands of years. And there was nothing wrong or gross about it.

Autumn Smith:

Yeah. I couldn't agree more.

Dave:

You run a company that makes high quality grass-fed meat. So, yes, you and I might both be biased in that I think coffee and meat are both good for you. I have a caffeine tattoo on my arm, but the muscle that holds up the tattoo is made of grass-fed meat. So, there's that.

Autumn Smith:

I need one.

Dave:

There you go. You also could have made tofu bars in the same amount of energy. This is what people don't understand about entrepreneurs, is that there are some out there who are just I'll do whatever is necessary to make money. Those are actually evil. There aren't that many of them, but there are some. Usually they're copycats. They'll find something good and then they'll make a cheaper version of it that's not as good and say it's as good. But then, there's other ones who were like I'm going to put my time and energy for 10 or 20 years into something that I think matters more than anything else so I can be

better. That's what you do at Paleovalley for almost a decade now. What's changed with grass fed over the past almost 10 years that you've done it?

Autumn Smith:

You know what, I think what's changed for us is just the fact that knowing there's different flavors of grass feeding. When we first began, we were, okay, grass fed, that just means they're out on grass. We didn't understand this regenerative component until, really, my son was born and we started to really get to know the farmers that we were working with and they told us about, oh no, continuous grazing can still be detrimental to the environment. It's what a lot of grass feeding operations are still doing.

We learned these highly managed systems that incorporate cattle and moving them around just like Dave's doing. They have a potential to heal the environment and create really nutrient dense food and restore ecosystem and biodiversity and the health of the soil biology and the fungi and the microbial fungi and all of that when it's done really well. That was really exciting to us that's why we actually ended up founding our second company solely based on regenerative agriculture. Now, Paleovalley is also solely based on regenerative agriculture.

But the thing in grass fed that really changed for us, A, the trajectory is good. People are getting more interested in it, but then understanding the nuance and the very many flavors of grass feeding was an integral part for us too.

Dave:

I've done my best over the past I guess 11 years now to put grass fed at the very top of the list of awareness, things that I'm working on, because it's fundamental to being healthy and it's also fundamental to... If I'm going to live for another 140 whatever years, which is my plan, we're going to run out of topsoil in 60 years and I'm starting to pay attention to that because I'm going to have to deal with that. I don't want to have to eat my neighbors, but I'm willing to.

Autumn Smith:

Well, I'm glad you live not by me. You're in Canada, right? But yeah, no, you're right, though.

Dave:

Canadians are polite. They say they're sorry before they lay down on your grill. It's ridiculous.

Autumn Smith:

They are pretty kind people. The thing that I noticed too when I learned is that a lot of people right now are focused on sustainability because it's important, like you said. But when 75% of our Earth's land has been degraded and when we only have six years of topsoil left, we can't sustain that. We have to regenerate. There has to be an upward trend. We have to reestablish it to a more worthy state. And so, that's for us what regeneration, why [inaudible 00:35:31].

Dave:

I can sustain it on my farm and you probably can on your farm. It's just all these people eating fake burgers right now were going to come and try and see a little couples of our soil to grow pea protein. It's not going to work out for them because my cows will bite them. Let's just put it that way.

Autumn Smith:

Yeah. And you saw. Like you said, every farm, there's context, right?

Dave:

Yeah.

Autumn Smith:

Everyone's different, but you saw the analysis from White Oak pastures, I'm sure, where a pound or a kilogram of beef released 20, I think it was 33 kilograms of carbon into the atmosphere. Actually, beyond meat, they did the same thing and it was four. So, appreciably better than conventional meat. But when you had regenerative and raised beef, it was actually a carbon sink and it was negative 3.5. So, essentially you'd have to eat a regeneratively raised burger to offset your beyond meat burger which I find very fascinating.

Dave:

You also have ... so for the carbon stuff and also from the phytic acid perspective. The first chapter of the Bulletproof Diet, I think first part was 2011, if I remember it, 2014 or something like that. It's like, guys, oxalic acid, lectins and phytic acid in plants are coming after you and so are microtoxins and so are histamines. All of those, over the past 10 years, we've been going deeper on each of those different angles. There's been big books about just lectins.

But phytic acid hasn't had its moment in the sun yet, but it's about to get it. This is the thing that's blocking your minerals. In fact, we know about it so much because chickens and cows, if they're fed grains that are high in phytic acid, it affects their growth rate. They actually have to had enzymes to help the animals grow. But when they give it to you, they don't give you the enzymes they give to cows. Cows have three stomachs so they can break down phytic acid, so they can build up that precious zinc and copper and magnesium and things like that that they need in their tissues so that we can eat their delicious grass-fed ribeye, which should grow on trees, but don't. All right-

Autumn Smith:

Yeah, and to... I was just going to say, because our mineral levels are actually lower than they've ever been in our food anyway, according to a recent analysis.

Dave:

That's why Danger Coffee's full of trace minerals because I'm like, we got to put this back in everyone. Even if they don't eat meat, we can do something. Just drink it every morning.

Now, you have two companies though. Paleovalley is doing really well. My kids love the Paleovalley stuff and they actually fight over them, true story, whenever you guys send it to me and I sneak it over the border up here into Canada. What's up with your new company, though, that's doing grass-fed meat? Walk me through the difference between the two companies.

Autumn Smith:

Okay, so Paleovalley was just a company that I created when... I actually had IBS for over a decade. My husband begged me to try dietary change, which at the time seemed so silly because all the doctors told me it wouldn't matter. But what I did, when I did the paleo diet, all my symptoms went away. It was miraculous. I actually was on a world tour at the time And I couldn't quite figure out how to maintain this lifestyle. I was-

Dave:

It's hard.

Autumn Smith:

It's really hard. I was in a different country every day. I was like, wow, this is not easy to maintain. I was eating pistachios, apples. Anyway, when I got home, I said, I have to make this reasonable for people because I didn't want to spend my life in the kitchen. And so, we just started with the grass-fed beef stick because it seemed to be animal products were really important and subsequent research has shown really important for mental health, which I definitely struggled with. We just went from there.

Oregon Meats or Oregon Complex came in because I got pregnant and I got tired. My husband tried every which way to sneak liver in, and I couldn't. It's not happening for me. So, we put it in capsules. We have an apple cider vinegar complex and a food based vitamin C. But at the crux, it's just really high quality, the best quality we can find, organic and regeneratively raised all the time, never cutting corners, never adding weird additives, and just the staples that you can have around for your daily whatever, whatever you're doing, to keep yourself really, really healthy.

Wild Pastures is actually, after my son was born, it was knowing the farmers and them teaching us about the nuance in regenerative ag versus just grass fed. We were learning that these other box meat companies were actually bringing the meat in from other countries and I thought, wow, we're just missing a giant opportunity to create an incentive for American farmers, create food sovereignty, create rehabilitation of the soil biology. And so, we just created a network. These farmers were telling us, "We love these regenerative practices, we think there's powerful potential, but we don't want to market ourselves." And so, what we did was-

Dave:

That's Wild Pastures. That's the name of that company.

Autumn Smith:

That's Wild Pastures. What we did was we keep it at wholesale prices too. We don't want this to be an elitist thing. We were hearing people really had a heart and wanted to participate. They couldn't find this kind of meat, and then when they did, they couldn't afford this kind of meat. And so, we just wanted to break down both barriers.

And so, Wild Pastures is just meat delivery, 15- or 25-pound boxes, all regeneratively raised, all from America and then we deliver it directly to your door. So, we also break down that convenience barrier, which is such an issue for people. We use local deliver deliveries, compostable packaging. We're using solar powered facilities. We have one electric car. We're hoping to expand that, but we are just thinking of the environment in every single aspect of our company.

Dave:

I love this idea. Something that I have done for a very long time is I order 50 or 100 pounds of red meat at a time since 2005 because it's so much cheaper when you do that. If you get a lot of ground, it's usually maybe half the price of what you'll pay by going and buying it fresh. What you don't understand is that when you go and you buy that fresh food, it's actually not fresh. It's been butchered sometimes six weeks ago and it's held in these big cryo-sealed wet bags of meat that preserve it for a long period of time and keep it wetter so they can charge more for it. It's called wet aging, basically. Once they take

that out and they cut it open, they put it there as fresh meat, yes it hasn't been frozen, but it's gone through a lot, let's put it that way.

Since I have my own animals and since you know this because you work all the time, it turns out the amount of time that the animal was spent hanging after it's butchered changes the flavor, but it also changes the nutrient profile and all that. So, I'll just say, going to the store and buying a defrosted grass-fed ribeye for 25 bucks, that's an amazing luxury. But if you want a grass-fed ground and you ordered it from Wild Pastures, you're going to pay a small fraction of what it would cost for what we expect it to be. Yes, you can have a very healthy pound of ground meat cooked with some veggies. It takes one pan. That's what I've done for the vast majority of my meals. Now, though, I have my own animals so it makes it easier. I just go out and take a bite of one. It's totally fine.

Autumn Smith:

I haven't done that, but maybe I should.

Dave:

So, how long a cow there works is-

Autumn Smith:

So normal. Well, that's good.

Dave:

All right. So, Wild Pastures. You have one electric car. How do you deliver at all 50 states? Or do you? What's the delivery range for Wild Pastures?

Autumn Smith:

That's what I'm saying, we are doing the best we can. Where we started, we weren't able to afford them, and now we are. We're moving up the chain. But yes, we just went national. We're trying to get little warehouses in every region. Right now we have the one in Southern California, one in Phoenix, one in Denver and we're working on getting one in Atlanta. But, yes, everyone in the United States can order now. We're doing local deliveries whenever possible, UPS when it's not or FedEx when it's not, but we're working. We're just hoping to get bigger and bigger and to make it tighter and tighter as we go.

Dave:

One of my dreams when I started the Upgrade Cafe in Santa Monica about, oh geez, eight or nine years ago, it used to be called the Bulletproof Café, it was that I wanted to have regular grass-fed, grass-finish beef only on the menu. I've maintained that the entire time even through the pandemic and everything, but I wanted to feature local ranchers. For these three months, I'm going to just pick a local ranch and just shine a light on why their meat is special and charge an extra dollar or two that goes to the farmer for their meat for that period of time. I got blocked. I got blocked because the requirements for restaurants to sell meat, for how it's butchered, are different than for you or me to buy meat that's frozen or buy at the local farmer's market or something, so we couldn't do it.

What people don't understand is that the big meat companies, most of whom now are owned by China. They're not even owned by the US. They control butchers. These regulations to require small farmers who take great care of their animals and name them the way that we do and actually really put love and attention and care and nourishing into the animal, sometimes you have to truck it across a

state to a traumatic low-quality butchering facility because of law that was put in place by the people who own the butchering facilities. It's really not cool. And then they put laws in place so restaurants can't serve locally sourced beef in many states, it all depends. California blocked that.

How do you get around that? Is your stuff... I guess you can't serve a lot of it in some restaurants in some states, but you're sending it directly to consumers who are free to eat it if they want the best stuff.

Autumn Smith:

Exactly, yeah. We haven't had that same problem. We actually just opened a restaurant in Colorado.

Dave:

Oh, nice.

Autumn Smith:

Yeah. Because we were long in ground beef and there wasn't a great grass-fed burger place around here, so we opened one. There's no sugar in the whole place, the fries are cooked in tallow. It's just everything that we believe in. In Colorado, it's possible. I'm sorry about California, though.

Dave:

Yeah, lots of things are not possible in California, like sanity and low taxes.

Autumn Smith:

Yeah. I used to live there. I know it well.

Dave:

Yeah. It's been a long time for me. All right, let's assume by now people listening are saying, okay, there might be something to this grass-fed stuff but I'm still not convinced. What studies have you seen on what happens when you feed cows grass? Tell me about secondary compounds and what those are.

Autumn Smith:

Oh, fascinating. Yeah, so the literature's all over the place, but we know that higher levels of antioxidants, more omega 3s, better fatty acid ratio with secondary compounds.

Dr. [Frederick] Provenza, he's such a champion in this area. He's doing a lot of these metabolomics analyses where he's looking at 50,000 of metabolites and he's finding that they change dramatically and the levels of these secondary compounds are so precipitously enhanced when diverse forage is fed. So, you're getting the lowest level of secondary compounds when it's a monoculture or one type of grass, and then in middle and in the highest levels when it's as diverse as possible.

These secondary compounds are anti-inflammatory, antioxidant, antifungal, anti-cancer. They have a number of different benefits and we've just brushed past them. Luckily, I'm actually getting ready to do my dissertation and Dr. van Vliet is going to see... We already just established that the amount of secondary compounds are far higher when the animal eats grass, but what we need to look at now is what does that matter for human health.

Dave:

Right.

Autumn Smith:

There was a really preliminary study in kangaroo. Do you know this study?

Dave:

No. Do tell.

Autumn Smith:

Okay. It's a beautiful study in 2010, where they looked at eating wild kangaroo consuming grass versus a feedlot beef and what did that do to levels of Interleukin 6 and CRP and markers of inflammation right after the meal. It was a crossover trial, so people ate both. They found dramatically lower levels of inflammation in the kangaroo.

Now, of course this is confounded because it's not a cow to cow comparison, but what Dr. van Vliet at Utah State is now doing is running that same trial cow to cow. Not only feedlot and then regeneratively raised but then also plant based. And so, we'll be able to ascertain exactly how that affects human health even though we can probably assume it's going to impact it favorably.

There's been other research in cheese to suggest it does and even a few studies that showed lower levels of triglycerides. But, yeah, the missing piece is how does this matter for human health even though we can definitely say there are clear differences in the nutrients when an animal fed grass and grain.

Dave:

I want to see someone do a study and maybe someone who's working, one of the professors you're working with can do it, I want to see red end process meat where they see industrial meat and all the nasty things that they do to it versus grass-fed meat. It's like, oh, you mean they're different? Because we know that they're different, right? There are so many different points there, but no one's just done a whole thing. Eventually, every time someone says plant-based protein, you can laugh at them because it's a with plant-based protein. Because they all do different things. Who would've thought, right? Like sarin, the nerve gas, is a plant-based protein. It does something different than hemp protein, at least last I heard. So, do that. Right?

We could also look at red and processed meats all run together like that and go, oh my God, they do something different than carefully cooked, carefully raised meat. And so, if someone says animal protein, animal fat is bad for you, they're dumb. If someone says, plants are good for you or bad for you, they're dumb too until they tell you which meat and which plant. It's just more specific than that, but I think you're going to really shed some light on that when you say here's what happened to humans who ate it versus just it happening. Are you going to work at the genome?

Autumn Smith:

Yeah, and the other-

Dave:

Yeah, go ahead.

Autumn Smith:

Am I going... Oh, gosh, the genome?

Dave:

Yeah.

Autumn Smith:

Is that what you're going to say?

Dave:

A-ha.

Autumn Smith:

Gosh, I hope so. I also want to look at the microbiome even though Dr. van Vliet has said the changes won't necessarily be meaningful in a small trial. I don't know exactly what they're looking at yet, but I can say, and this is really cool too, another project he's doing is not only what happens when you eat one regeneratively or grass-fed meal, but what happens when your whole diet consists of that. Those are longer trials. It'll be a few years, but I think you'll see amazing benefits there especially if you can see a benefit in the very beginning in that one trial, at least in 2010.

Dave:

Okay. I think we're going to learn a lot more about that. As a final bit of learning for listeners, can you talk to me about the incredibly bizarre labeling that's on meat? I raise meat, I know a lot about meat. I walk into the store and I'm just like, if it's not grass-fed, grass finish, I'm not eating it. I don't have to pay attention to all the garbage-y marketing underneath it.

Autumn Smith:

Cage free, free range. You know what, that just doesn't really mean what we think it does because a lot of times it just means there's going to be a door somewhere that they could access but probably don't and that they're still in cement blocks, thousands of animals together. I wish that meant more. That one's kind of evil.

No added hormones on pork or chicken, that's illegal. That's distracting you from the other more important questions. Made in America is a crazy one because you can actually just process a product in America and have it brought in from another country, so I think that's pretty evil,

Dave:

Including meats, right? You could literally have a chicken that was raised in China on an industrial waste site and bring it in and they'll say made in America.

Autumn Smith:

Exactly. I think it's really important, especially post pandemic, people want to know they're supporting America and creating that food sovereignty. That just blows that out of the water, and that's exactly why a lot of the other meat delivery services, their grass fed but they're not domestic. So, I think that's kind of evil.

I think that humanely raised is evil. You want a third-party certification to make sure that the animals, if that's something you care about deeply, because humanely raised, there's no regulation there. And then lastly, I think grass fed, I think it's tricky because it's not regulated unless you get something like American Grass Fed Association who's coming in with their third-party certification and they're making sure that these animals are eating only grass for their whole entire lives and on and on. But just grass fed as label, slightly evil. I'd say it's the least evil, but it's slightly evil still.

Dave:

Okay, slightly evil but not that bad.

Autumn Smith:

Yeah.

Dave:

Okay.

Autumn Smith:

I think it's... Yeah, it's on the evil scale.

Dave:

All right, and then when you're going to eat it, if it says grass fed but it doesn't say organic, what do you think?

Autumn Smith:

Ooh, yeah. That's a good one. Oh yeah, I forgot, organic too, also, doesn't necessarily mean the cow is eating grass or on pasture. And so, yeah, for me, I like American Grass Fed Association's label better than organic, but if it's organic and grass fed and American Grass Fed Association certified, I think that's best-case scenario.

Dave:

I've never seen that, but I would eat that if I saw it. I look at the organic standard as being, I wanted to pay more and I probably bought it from a big company because, especially in coffee, the organic standard puts small farmers out of business. It's so expensive to meet all their paperwork and stuff that you have to sell your small family farm that you've had for five generations to a big company so it can be organic so you can get a dollar or pound more.

Fair Trade Alliance, coffee is far better. When it comes to grass-fed meat, I want to see grass fed before I want to see organic. Yes, it'd be nice if they didn't spray, but you're not going to spray Roundup on your grass to feed your cows because it kills the grass, right?

Autumn Smith:

Yeah.

Dave:

So, you generally don't have to worry about it. If it's grass fed and grass finished, you could do it. But you could feed genetically modified dried grass to cows, and a few companies do that. But even then, I think you're better off because even the genetically modified grass probably wasn't sprayed of glyphosate. Any thoughts on that?

Autumn Smith:

Right. No, I would agree with that. I would absolutely agree with that. We actually, in the beginning of our business, we worked with a lot of those farmers who couldn't necessarily obtain that certification because they just didn't have the resources. We worked with them and we found out, yeah, most of them are not doing anything to the soil or to the land that would harm it anyway. They are good people who just had a smaller system. So, no. I agree.

Dave:

Yeah, I learned the same thing in coffee. We couldn't afford pesticides so we didn't use them. We used animal poop to fertilize because it was free and we wanted to eat the cow. That's how it works.

It is a bit of a problem in North America, though, because if you are a conventional cattle farmer and you're converting over to being grass fed, maybe not organic, you could do stuff that you just don't know is harmful because it's how you've always done it, but it's not how your grandfather would've done it. I think we're going back and we're fixing the system.

I'm so impressed because the people who go grass-fed, when there's a drought, they survive and all the conventional ones don't because they have enough vegetable matter, enough topsoil to capture water. So, this is about sustainability of the business and the planet. I'm all about that.

Talk to me about what happens when you're eating local. I love what you're doing with your meat delivery company because it is local, but what happens when there's adequate local farms in an area? What does it do economically? What does it do to the cost of the meat?

Autumn Smith:

Yeah, and so important is that it is as local as possible. We are still finding every farm up to our standards. And so, it isn't always going to be local. But food sovereignty, like you said, these big companies like Smithfield, they own 50,000 acres in Missouri. And so, these CEOs and far off companies are outsourcing their pollution and making decisions that affect your community directly. Whereas when you can eat locally and they can have farms like this, then the farmer has a great life.

We have an investment. There's a different kind of commitment to the land when the farmer is making decisions that directly affect the people in that community. Again, we are protected from food shortages. If we get in an altercation with another country and they cut off our supply, then what are we supposed to do? Again, we miss the opportunity to rehabilitate the soil literally in the community that we living in. Like you said, it's beyond just sequestering carbon. We're making water. We restoring aquifers and we're allowing it to come into the water and to be held by the soil. We're creating biodiverse communities. We're bringing the insects and the pollinators back and the animals.

We are only as good as the health of our soil. And so, when we are restoring communities, when it's a local operation, we're helping the environment; we're helping people create more nutrient dense foods; security, job securities there; and food security and food sovereignty happens as well.

Dave:

Thanks for making a company that's made a difference. Actually, two of them. This is sacred work. Nourishing your community and others really is a sacred act. Creating food for people matters more, I think, than most of us really know about. It's not just how does it taste, it's not just how did it look, and it's not just even how was it prepared by a certified French chef. II's what went into making the food into food before we cooked it, before we plated it, before we smelled it, before we added the herbs and the salt and all the other good stuff. It all matters. If you get the foundations wrong, I don't care if it looks and tastes good if it's not. What you're doing is the hardest to see, the most thankless part of it, but the most important part because all the rest doesn't matter if you get this wrong. So, keep doing it.

Autumn Smith:

I won't quit. No. I love this work. It is hard, like you said, but we are keeping on this trajectory. I grew up in Montana and people used to laugh at me 10 years ago when I said, "Grass fed, it's a thing." They're like, "No, it's not. You're chasing... I don't know what you're thinking." But yeah, it's here. The time is now and we're going to keep at it.

Dave:

All right. I'm with you there. That's a great ending point. But, before Chris stops it, Upgrade Collective, you guys want to ask Autumn any questions? Adrianne, you had a really cool question. Don't you want to ask it? Okay, she wants me to ask it for her. Okay, she wants to be on the other screen. She's saying why are the beef sticks fermented and are there benefits from that from Paleovalley?

Autumn Smith:

She has a great question. When I got on this health crusade and was able to reclaim my health, I noticed on my tour that something about the grass-fed beef stick I was buying was still bothering my stomach. And so. I looked into what they were using and I found this ingredient called encapsulated citric acid, which is the industry standard because it's more lucrative because it speeds the process up but it was made from GMOs and then they code it in hydrogenated oil. These little beads just melt into the stick and that preserves it.

We fermented it because I just didn't want to use that ingredient. I didn't know if it was something that was causing problems for me, but I thought, if there's any chance, I want to do it better. And I knew that our ancestors were fermenting meat way back in the day, and so, yeah, we fermented.

I do think there are benefits. It's a simple process, obviously. We're feeding sugar to bacteria and that's creating lactic acid that's preserving the stick. Initially, there were probiotics in the beef sticks, but after having water quality issues, we've had to take the water activity down. And so, there aren't actual probiotics in there anymore, but they are different. They're moist, there's a snap, they're easily digestible. I've even heard people who are coming off a vegan diet or vegetarian diet. It's just easy to absorb or easy to digest, far easier than other meat sticks would be. Of course, you're missing out on all those other additives that are in there as well.

Dave:

It turns out that meat fermentation has been a long standing part of how we preserve things like pepperoni and a lot of the hung sausages and things like that. We have smoking, salting and fermenting are the three ways you'd preserve meat. When it's fermented, you can have higher histamine in the food, right?

Autumn Smith:

Yeah.

Dave:

So people are histamine sensitive, which is a lot of autoimmune things. A lot of people along COVID, they don't do as well if it's fermented. I think the new way of doing it with less water activity so it probably also has lower histamine in the Paleovalley sticks and the newer ones.

Autumn Smith:

Yeah, I would imagine so even though I can't confirm that. But...

Dave:

Okay, got it. What's the name of your restaurant in Colorado? People asking for that as well.

Autumn Smith:

It's called Wild Pastures Burger Company, and it's in Boulder. It's right on Pearl, right by Whole Foods. Please come see us. We have a really strong local following, but love to have you.

Dave:

Well, Autumn, it's been great fun. Thanks for putting up with my odd sense of humor, which is amplified by my coffee and my adjusting to this time zone. It's been great fun.

Autumn Smith:

It's been an absolute pleasure. I've had a blast and I just appreciate you and all you're doing too. So, thank you for connecting and for fighting the good fight and just let me be here.

Dave:

You got it. Upgrade Collective, thank you guys for being here and being a part of the conversation.