

When Sugar Becomes Addictive with Ali Miller, RD – Insatiable Season 11, Episode 2

[INTRODUCTION]

[00:00:08] AS: When you're fed up with fighting food and your body, join us here. I'm Ali Shapiro, creator of the Truce with Food Program and your host for Insatiable, where explore the hidden aspects of fighting our food, our weight and our bodies and dive deep into nutrition science and true whole health. Fair warning; this is not your parent's healthcare. This is a big rebel yell to those who crave meaning, hunger for truth and whose lust for life is truly insatiable. Believe me, freedom awaits.

Have you ever had a colleague, a family member or friend who smoked and was agitated close to their smoke break or if they otherwise couldn't grab a cigarette, or you may know someone who struggles with alcohol and has trouble resisting a or many drinks. Perhaps you have similar feelings, but they're directed towards cookies, chips other kind of carbs. We have labeled the staples of the American diet as an addictive substance for many reasons. On one hand, our agricultural policy in food production that revolves genetically altered crops that produce cheap carbohydrates represents a bigger lobby and more electoral laws than tobacco whose powerful lobby allowed cigarettes to be marketed as a healthy way to relax and safe for years including by doctors, despite widespread evidence to the contrary.

In addition to not being regulated, the sugar industry gets an estimated \$4 billion in annual subsidies courtesy of US taxpayers. On the hand, lobbies and food politics aside, food addiction and consequences require a more nuanced approach than abstinence as possible for cigarettes and alcohol. We die if we avoid food completely, and food is much more fundamentally woven



into our culture in earliest memories than alcohol or cigarettes, which in all cultures are generally adulthood indulgences.

Do you remember summers at the pool with Swedish fish, or warm, salty soft pretzels from the snack shack, or holidays with grandma's amazing mac and cheese, or dad's famous mash potatoes, or like me, Friday night Pizza Huts where you cashed in your book reward for reading five books to a free personal pan pizza? Chances are if you scan your memory, some of your best warmest memories involve sugar associating this ingredient with pleasure, celebration, ritual and reward.

For the purposes of this season, by sugar, I mean we think of as traditional sugar, like sodas, candies, cake and added sugar in processed foods, like salad dressing, breads, pretzels and other salty carbs. On the flipside, your most difficult memories probably also involve sugar as a source of refuge. If like me, after another day of being bullied and isolated from "the cool kids at school", you found bagels in the fridge to eat and numbed the pain of being othered, or right before a spin tap to see how far your cancer had spread, your parents took you to the Pancake House to try and bring some sort of comfort during the scariest health scare you've ever had. Who can forget SnackWells? A dieter's low-fat bonanza where we thought we could eat the whole box because it was low-fat, not realizing that all the sugar was making us hungrier and hungrier.

Sugar has comforted most of us when we were isolated, in the midst of chaos, or for many of my clients, it was a lift when being emotionally neglected. Food companies methodically and relentlessly advertised to make us trust sugar and let these processed foods into our lives in a way not only we thought a warning label like cigarettes, but actually in a way we now come to see gout.

As a result, what was only used in a way that we use spices today, a little dab'll do ya is now in the stable of our collective diets. While now it's recommended to limit sugar, food companies



didn't create but can capitalize on our puritan Christian and capitalistic narrative of sacrifice equals reward to ignore the mind-body connection and the need for emotional intelligence and agility.

Adding insult to injury, we as taxpayers are paying to make ourselves and the environment, which is degraded immensely with our monoculture agriculture focused on sugar, corn, soy and wheat that will be processed in sugar and well, or subsidizing ecological collapse in the resulting in the pandemics like coronavirus. The decline of our personal and environmental bodies has led to an over-taxed healthcare that was never designed for the chronic diseases which in large part driven by our food supply and its consequences.

In this season 11 of Insatiable, we will look at how we as individuals and a collective can go in a sugar rehab physically and emotionally. We will explore how we arrived here, root causes of sugar addiction, if sugar is really addictive and can we eat it moderately and how we can move forward with sugar and its proper pace in our life and what does that look like for you?

Without further ado, let's enter sugar rehab together.

[INTERVIEW]

[00:04:52] AS: Welcome, everybody, to season 11, episode 2 of Insatiable; when sugar becomes addictive with Ali Miller RD. When I was struggling with bingeing and overeating, I assume I couldn't eat just one cookie or one piece of cake. As I learned about balancing my blood sugar, I realized the lasting context of when and how I could eat sugar or not go overboard or have more cravings than when I started eating. I discovered if I ate dessert that was high in fat and after a meal instead of an empty stomach, I would satisfy my physical cravings. Then when I discovered how our story and trauma patterns make us turn to food personally and in grad school, I was able to adjust the emotional reasons I turned to sugar when I didn't have a physical craving.



I believe when you address the physical and emotional root causes of sugar cravings, it doesn't have to be addictive. Meaning, it's possible to have sugar in moderation, but that's my view point. I wanted to have the progressive and whip smart, Ali Miller, on today to talk about her views of when sugar is addictive including the science behind sugar addiction, including some less obvious root causes of sugar addiction and how we can view a low sugar diet in context of not feeling restricted or food freedom.

My sister turned me on to Ali Miller, got my mom her anti-anxiety cookbook for Christmas, which she loves, and I have since become a big fan especially in this age of corona virus, which she's becoming outspoken voice about non-pharma inventions and instead how we can build our own immunity including devising sugar in our diet.

Before we get to hear from Ali, let me tell you a little bit about her. She is a registered dietitian, a certified diabetes instructor, a certified weight management specialist and a therapeutic lifestyle healthcare practitioner. Ali developed her food as medicine approach to disease management through her background in natural food preparation in degree in nutritional sciences from Bastyr University, a renowned leader in naturopathic and functional medicine.

The diverse medical rotations available in the Houston Medical Center drew Ali to Texas where she implemented clinical treatment plans provided in some of the top hospitals in the country. She combines the strengths of both naturopathic and allopathic fields practicing functional medicine and is guided by nature, yet grounded in clinical scientific discovery.

Thank you so much for being here, Ali.

[00:07:05] AM: It's my pleasure. I'm stoked for an awesome conversation.



[00:07:08] AS: Yeah. I just love that you're truly integrative, right? Like in the truest sense of the word, because that's very rare. We have these camps of like all natural or all Western, if that's the polarity we're talking about, but you're really pulling the best from both it sounds like.

[00:07:23] AM: I'd try my hardest, and I think even furthermore, whether you are allopathic or functional, the biggest danger is when you're working with a practitioner that is merely protocol-based and not into that N equals one individualized approach. That's what I really pride myself on. I kind of call myself the detective of the body, if you will, and I think that every individual has their own story to unpack.

[00:07:46] AS: Yeah, I love that. Before we get into this sugar stuff, I just want you to let everyone know why you chose Bastyr, because you're not traditional even registered dietitians who go and learn kind of a traditional approach? I mean, you even started off assuming that food was medicine rather than maybe a way a traditional RD might study. What drew you to that intuitively?

[00:08:11] AM: Sure. Well, initially actually, I was in college as a dancer, and so I always made a strong connection with the help of the human frame and using the body more I guess as an art of expression. Over time, I got really into food policy. I still am a hippie, but I was like really hippie in my college days, travel and saw fish, all the things?

[00:08:37] AS: My friends did that.

[00:08:38] AM: Yeah. I really got into our local farmers market and the word locavore, Michael Pollan was just hitting the scene then, and I started to redefine my own relationship with food. I took a turn into vegetarianism in the process and I actually sought out Bastyr University because they had a vegetarian café. Isn't that wild, right? As you'll know and you'll learn as I share my food philosophies current. But yeah, I went there for that and also because it was the naturopathic college of medicine and the most accredited naturopathic college of medicine by



the AMA and also the only naturopathic college of medicine that was offering a DPD program, or a program in dietetics to be a licensed and registered dietitian.

I knew that if I was going to invest in this world, that I wanted to have the ability to have a foot on each bank of the river if you will to influence allopathic, which is the fancy word for conventional medical model, and yet still practice functional integrative naturopathic approaches. When I went there, I remember in the student orientation standing up and being I think one of my descriptive terms was like, "I'm Ali Miller." Oh no. I wasn't a Miller then. But anyway, "And I'm a vegan," and I thought I was going to save the world making everyone vegan.

Halfway through, I defined my favorite mantra, which is doctrine creates disconnect, because I found that I drove myself into pretty aggressive player of Hashimoto's thyroiditis after a stint of a three month period as a raw food vegan after I had torn my gut up with all the vital wheat gluten and soy on the planet, and [inaudible 00:10:22] and these food log things versus whole real foods.

I went through the process myself of kind of breaking up with that religion doctrine of really starting to de-compartmentalize and redefine what a whole food is and how these foods influence our biochemistry and our physiological processes.

[00:10:43] AS: Oh my God! I love that. In this age of polarization, I'm most interested in learning from people who are willing to question their lens on the world.

[00:10:52] AM: Yeah. My pendulum has swung all of the places.

[00:10:56] AS: But I think that's a really important in this era especially where we're kind of all in these polarized camps of like, "Can I look at my own lens and be willing to realize that there's blind spots?" I find that so many of us in the nutrition field who actually had to own those blind spots tend to have some of the best results, because you can separate what works for you



versus what is true for your client. Love that story. Before we get into like the nitty-gritty of sugar addiction, what's your personal relationship or history sugar been? I'm curious.

[00:11:27] AM: Yeah. I mean, I started super standard American diet, and especially in like high school, and I was dancing. I remember I would drive home from dance. I would dance six hours a day and I would drive home and get an All-American meal from McDonald's with a McFlurry, and that was like it didn't matter, because I could just dance it right off, and I would eat sour patch kits because they were zero grams of fat, and I would drink diet sodas. By no means did they come from a very organic root system. I had to really redefine my relationship with food by learning the hard way and dealing with chronic nutrient deficiencies and hormone imbalance after being on birth control, post-birth control syndrome and dealing with the autoimmune crash and trying to understand what things were driving imbalance in my body.

I've been a long time sufferer of candida overgrowth, and that is one of the most ultimate real deal sugar beast that you can have in your system. I'm sure we can talk about drivers of sugar cravings, but that's a big one, the microbiome. Unfortunately, it's one of those drivers that you're just adding fuel to the fire every time you try to feed the beast if you will, because it get stronger and more powerful and that dysbiosis further suppresses the landing gear to your stress response. So you're feeling wired and stressed out and strung out and you go for your next fix.

[00:12:53] AS: That's such a great way of describing it, because for people who on the podcast aren't familiar with Candida, it does the bacteria – Ali, you can correct me if I'm wrong, but from what I understand, the “bad bacteria overgrowth” actually feeds on sugar. That's why she called it it's like feeding the beast. The more you feed it, the more he won, and it's these bacteria will demand it, right? It's not a willpower issue in the sense that you can't cure candida with willpower. Let's put it that way.



[00:13:20] AM: Right. Right. I mean, it's definitely a process that needs to be approached with a gut cleanse and incorporating botanicals and the carbohydrate restricted diet. I do believe and practice often. It's interesting, because in the context of polarity, I'm, as you said, a certified diabetes educator. I use the ketogenic diet in my books and I practice the ketogenic diet myself. But I also am in this world of like if a product has the word keto on it, I'm probably not going to eat it, because I consider that a chemical shitstorm most speaking and I will eat dates and bananas in my ketogenic diet.

I really kind of take this framework of like these assumptions and then break it back down into what is metabolic flexibility. How does my body use this food? What is the favorable impact that I'm looking to achieve? You can definitely go too far down the rabbit hole in any form of a diet approach especially when done with flying doctrine and you're not open to understanding whether something is serving you or whether something is working against you and driving or perpetuating imbalance.

[00:14:24] AS: I love that, because we often talk on the podcast, like is keto working because you just added more fat?

[00:14:31] AM: [inaudible 00:14:31] for sure. Yeah.

[00:14:33] AS: Yeah. It's like or is the Mediterranean diet working because you need it? It's more like animal protein. Often, these – Like how you're calling them doctrine, and I joke people who don't have religion find I nutrition because it's like, "Oh! Something to believe in." It's like orients you to a whole belief system, but there's often at least in my approach with clients is there is no one-size-fits-all similar to you and it's like you have to figure out what components work for you rather than taking their Zen answer. It's like there's some truth in everything.



Do you think sugar is addictive? You talked a little bit about candida [inaudible 00:15:06], but do you think sugar is inherently addictive or is it addictive for some of us because we're wired differently? Let's hear [inaudible 00:15:13].

[00:15:14] AM: Oh, I think sugar is definitely addicted and we see that in research studies when we look at imaging in the brain and how dopamine levels light up especially when sugar is paired with fat, but we do see that there are definitely addictive patterns and that there is also the response of the cephalic physiological response to sugar where you taste something sweet, your pancreas responds by pushing out a bunch of insulin. Often the case of pre-diabetes or insulin resistance you're, putting out an excessive amount of insulin which drives your body into a hypoglycemic low blood sugar drop which create the physiological demand, whether it's irritability, shakiness, sweats, vasovagal like imbalance or dizziness as far as like vertigo-like symptoms.

A lot of this can be seen as a refractory hypoglycemic drop following a hypoglycemic event. So there's that physiological addiction where then you need more to get your blood sugar back, and that's even separate from the brain and mental pathways and neurotransmitters. We tend to joke that the word stress spelled backwards is desserts, right? There's definitely an influence when we're talking about the HPA axis in the adrenals. Our cortisol, which is the primary steroidal hormone of survival that we make under fight or flight mode from the adrenal glands, it's a glucocorticoid, so that in itself influences how our body metabolizes sugar.

There's these physiological processes, there's neurotransmitter elevations of list reward seeking with dopamine, and then there is the microbiome piece that definitely can become addicted, because if you feed the microbiome refined carbohydrates and excessive sugar, especially if you're paring that with pro-inflammatory ingredients that disrupt gut integrity and even artificial sweeteners, which are bacteriostatic and sterilize the healthy biome, the lactobacillus and the bifido, you're setting up camp then for your enteric nervous system or



your brain of the gut to crave sugar. I just named four processes. I think I would say, yes, it is addictive.

[00:17:36] AS: Yeah, I love that, and for people listening, what Ali was saying about – Ali, you can again correct me, because you have much more scientific terms, but the HPA axis, I always think of it as kind of registering all the physiological stress that you have in the body. It's like it does that, and overeating and restriction both blows contribute to that. If you're in a binge cycle or dieting or overeating, that contributes to that, but what you're saying is when that is stressed, for whatever reason the body is stressed, that then basically causes more stress on your adrenals and it kind of feeds the beast. Whether it's gut microbiome, or the HPA axis, or blood sugar crashes. Correct?

[00:18:15] AM: Most definitely. Yeah. It stands for taking it a little geekier and just compartmentalizing it. Hypothalamic pituitary adrenal is what the HPA and the A stand for, and the hypothalamus and pituitary in the brain. Like you were saying Ali, there's a lot of dysfunction. We think of the hypothalamus as the primary regulatory center of our body. It plays a role with anything from body temperature, to our sleep cycles, to satiety, and that's where leptin crosses the blood brain barrier and docks and has a huge role with like hypothalamic amenorrhea or loss of our menstrual cycle if we aren't eating enough fat or calories. We can also see the influence of leptin just merely on satiety and appetite regulation.

There is definitely a lot of mechanisms right there, and then if the pituitary, if all the energy of the HPA axis is in a sympathetic state, which we learned in school as fight or flight mode, then all of the energy of the hypothalamus and pituitary go full steam ahead to stimulate the adrenal gland. What happens is we're not getting optimal balance in what's called the parasympathetic state, which is what we were taught us as the rest and digest mode, but I would argue that it's really our regulatory mode.



It entails not just resting and digesting. It entails reproductive health. It entails our metabolic health, our thyroid – That pituitary in the brain makes your thyroid stimulating hormone. The hypothalamus, the H there, makes your thyroid releasing hormone. When we distract our HPA axis into merely survival mode, our regulatory function, metabolism, sexual hormone, cravings, sleep, sex, all of that gets disrupted.

[00:20:01] AS: I love that you mentioned that, because I feel like so often we have this like [inaudible 00:20:05] or category in our mind that health is just the absence of disease, right? That gets you to zero if we're like thinking of a continuum, right? There's this whole other 0 to 1 million of what's possible in terms of – I mean, you mentioned fertility, and also good moods, and all these kind of stuff. I'm glad you brought that up. It's not just getting to zero.

[00:20:25] AM: Right. Right.

[00:20:27] AS: Well, and I think it's important for people to understand, is in those four processes that you lined out, it's showing that the body is just not equipped to handle the amount of processed foods and sugar. It's just not designed. You can't just focus on eating less sugar it sounds like. You also have to feed your body the right things so that it doesn't crave this sugar and it can operate in a way that isn't – I guess what's interesting is it's like not only is it not set up for sugar, but it's designed that because in evolutionary speak, the only time we were really stressed was we needed more food or we needed to run from –

[00:21:03] AM: Acute.

[00:21:05] AS: The proverbial sabretooth tiger. It assumed it needed sugar, but yet it's not equipped for the amount. So it's this, "Oh! You got it right." It just shows how the disconnect and how out of alignment our modern society is with how our body is really set up to thrive.



[00:21:20] AM: Oh! And each of those mechanisms – What’s wild, each of those mechanisms has their own unique deep dive chicken and egg rolling rock if you will. One of the interesting ones, I’ll list two just to kind of take it a step further, which is kind of fun. If we’re talking about back to the enteric nervous system, right? If you're dealing with candida, you're getting this innate craving for sugar to feed truly a beast. Our microbiome outnumber the cells of our body 10 to 1. We are really piloted by our microbiome and it does play a huge role with connecting our enteric nervous system to our central nervous system.

I mentioned the neurotransmitter connection there, and that influences our thoughts, our cognitive function, our behavior. When you're in a dysbiotic state, whether it is a dysbiotic bacteria, or it is yeast overgrowth, or it’s SIBO, your body puts out more epinephrine. Your body starts surging adrenaline essentially as a white flag of like something's not right and your body suppresses the amount of landing gear to the stress response, which is your serotonin and GABA. That’s really made in higher amounts when you are in a symbiotic-balanced gut.

Not only is the gut dysbiosis creating the sugar craving and you're feeding it, but then it’s putting stress signal into your body that’s telling you you should be freaking out about something, which is up regulating your HPA axis. It’s like these links. They actually get tighter. It’s really wild. Then when you’re under chronic stress, you burn through glutamine at higher rates. That’s in so many clinical research studies, and we see that that could be a contributing factor to driving leaky gut. But glutamine also has been shown supplemental use of L-glutamine to aid with addictive tendencies, craving, and it plays a role with supporting our enterocytes, or the gut cells lining up our gut.

Your bad gut imbalance drives sugar cravings. You satiate that. Not only do you get bloating distention undesired symptoms of the yeast or bacterial overgrowth, you're now putting out more stress chemical. The stress chemical is depleting, the nutrients that's helping you, and it’s just keeping going.



[00:23:35] AS: Oh my God! Will you list some of the other one? I love this, because I think what I often talk about on the podcasts, and it's worth repeating, is it's like the good news and the bad news is everything is connected, right?

[00:23:46] AM: Yeah.

[00:23:47] AS: But it comes back to these simple things that aren't easy, but that if you really focus on these few tenants like reducing sugar, which I'm also defining is processed foods, because that's the main ingredient, processed foods this season, so much stuff can get better, right? Not just your physical, but the emotional way that you process the world as you just described with how these processes influence how we feel.

[00:24:10] AM: Yeah, most definitely, because then there's other – I mean, what's so important to examine, and I hope that the narrative of healthcare starts to continue to move in this direction, is that we run based on nutrient status. Every biochemical process in our body requires a nutrient to produce a biochemical reaction and have an influence on our physiological function. Again, when people are like, "Well, why would need supplements or why would you start with nutrients?" Food as medicine is nourishing your body with an abundance of the compounds that up-regulate or support processes that are hindered or compromised, and often that does require targeted nutritional supplement on top of diet strategy. But once you've achieved your repletion, you can hopefully maintain with diet, but it's a double-edged sword of also the removal of the pro-inflammatory compounds of what I love to call chemical shiftstorms, of the processed products that are loaded in with endocrine disrupting compounds that create hormone imbalance or loaded with pro-inflammatory compounds that disrupt our gut lining or actually deplete nutrients or provided synthetic forms of nutrients in the sense of any grain product with folic acid as supposed to a methyl nature made folate. There's both ends of the spectrum of you have to remove the things that are creating dysfunction or havoc in your system as well as focus on an abundance of the nutrients that your body requires to optimize the process.



[00:25:43] AS: Oh! I love that, because often we think of like if you're looking at food through a diet license, it's like, "I can burn off those calories," or like, "I'll just less the next day," but no one's thinking about – I mean, at least I wasn't in my dieting days or even, "No. This is actually costing me in other ways besides just with the scale is going to show." It's going to make it harder to focus the next could days. I'm going to be more irritable. My body is going to have to clean all these out. It's like we get more irritated when our to-do-list grows, and it's kind of like what happens with our body.

[00:26:15] AM: Totally. Totally. I think empowering people with this high-level information is really important, and that's what I try to do in really all of my work including all of my books, is allow people the opportunity to go to that space. I think that when we learn about in a sense of like sugar cravings and whatnot, if we know that were high-risk at 6 PM – We're very pattern-oriented individuals, right? So we need to kind of look at our behavior chain and examine the troubled areas. We often do better with replacement as supposed to just pure restriction, and we do really well with logical empowerment.

If we know that 6 PM is the witching hour and that we're going into our pantry and opening the door without even registering, "Am I hungry?" But it's just this habitual thing or we're cracking the bottle of wine or whatever it is, we know that likely we're looking for that, "I was a good girl. What do I get?" scenario. That's what I call it least, like, "I had a day. What do I get? What's my bliss reward? How do I numb from that, or how do I recover from that depletion?"

The reality is we're burning through neurotransmitters through stress demands. On a high stress day. we're showing up to the house at 6 o'clock depleted in dopamine and serotonin. We're burning through these at higher amounts to combat that fight or flight stress response. Why not be logical and why not think in an abundance sense of let's say tyrosine? High tyrosine foods? To use like a nori wrap and smash avocado on that and put some in-house roasted turkey and roll that up and do a quick 4 PM snack, or I have these nori roasted almonds that I



love to recommend to people to do something that's savory and provide yourself a good dose of L-tyrosine, which is the precursor to actually make dopamine is going to set you up neurologically for higher success rate. You also are going to be satiated if you choose a source that has fat and protein and [inaudible 00:28:13] amino acid, you're going to get a protein source with that. Then you're not showing up with an empty cup. You're showing up actually satiated biochemically.

If you are to eat nothing and then you go home and you eat that cupcake are empty calories that are laden and refined processed carbs, that does spike your dopamine. That's why you're clinically addicted to that high, right? But it doesn't replete your dopamine stores. That's really important for people to understand, and it further actually can create not only the addictive tendency, but a depletion, because processed flour-based foods actually can leach vitamins and minerals out of our body. You're now lacking some of this cofactors and activators in your B vitamin family that are supposed to engage or convert your neurotransmitters.

[00:29:03] AS: I love all these. As you're talking, it makes me think about – I mean, this is kind of a little off-script, but I'm curious, the whole intuitive eating movement, right? I did a whole episode in kind of frozen cons of intuitive eating and also part of why I agree with the [inaudible 00:29:18] of intuitive eating, yet I find the capital intuitive eating as like a movement. It's sometimes problematic, because the whole idea is that the only reason we kind of turn to food is because of restriction, and I'm oversimplifying it, I know. But there is none of this hardcore science or understanding of balancing blood sugar, which I think is the key for people to start, and then that helps your gut health and then you can fine tune all that. But because blood sugar just set you up for the next couple of hours so concretely. But how do you manage that? What's your opinion on that kind of that framework of like legalize everything and hope for the best?

[00:29:57] AM: Yeah, I have a lot of rants in my tank about this concept of food freedom and I think that's that what dissociates me in a lot of the world of registered dietitians. I think that



the all foods fit philosophy has done such a disservice for the field of registered dietitians that are supposed to be experts on food. I think that it's a very convenient mantra or phrase for industrialized food products and for big ag, and I think that unfortunately like anything in the medical field, there's a lot of corporate and financial interest in the philosophies that are shared and even the treatments algorithms that are applied.

I digress from there, but I think that food freedom is not saying that you can eat chemical shitstorms. I'm sorry. That's one of my favorite phrases, because it's true. I think that food freedom and all foods fit makes sense if we're talking about whole real foods. That's not disordered eating. That's called eating food versus eating chemical products that don't belong in the human body in the first place. That's where I stand on it and I'm so sorry if people disagree, but I don't think anyone has a deficiency of red 40. I don't think anyone has a need for plastic-like particles in their foods. I don't think that anyone has a need for excitotoxins. We're just not seeing that doing any benefits to the human frame, to our mental health, to our immunological health, to our metabolic health and so much more.

[00:31:33] AS: That's fascinating. I never thought about it as like food freedom or "allowing on the foods". It's almost like a Trojan Horse for industrialized food and big ag. I never thought of it like that.

[00:31:43] AM: I've never disagreed with food freedom if we're defining of food as a food. You know what I'm saying?

[00:31:50] AS: Yeah.

[00:31:50] AM: That's what I'm saying, I'm radical in the keto space because I allow a banana in my low-carb zucchini collagen muffins. I do believe all foods fits. I believe based on your metabolic flexibility, you should find what distribution of foods serve your body best. But if you're asking me about food freedom, I'm talking about my patient who has rheumatoid



arthritis who has 14 different joint replacements and hasn't kneeled in church for seven years and kneeled because she is killing it in her ketogenic diet and her inflammation has gone from a CRP of 14.6 to less than one. It's that's what food freedom is. Using food to actually be able to feel amazing and free in your body. That's what I'm talking about.

[00:32:40] AS: Yeah, I love that. I was thinking about how you were talking about with your books and everything, like let people know the science and then like this logical process can take over. It makes me think about how in some of these intuitive eating movements, whether sometimes it's by RDs, but sometimes it's just by like health coaches who have no RD background and it's like they're missing this whole component of education I think in a way or lens on the world about looking at food through medicine, because I know that some in the anti-diet world now, there is a lot of, "Well, this research shows that these foods don't really help with health." I don't know if you're familiar with all that, and I don't want to go into like who's saying that, but you probably know. It's just fascinating to me, because I'm like with me having a dysfunctional relationship with food, it was the obstacle and the path to food freedom, especially because we can't not, right? If you're not drinking alcohol, but like having to really view it from a different lens rather than calories has been so freeing for me. I mean, I'm healthier today at 41 than I was like in my early 20s. I don't know. My mind is just kind of spinning now about –

[00:33:46] AM: Well, everyone's freedom of their food choice is going to change based on their own vulnerabilities and also their season. You know what I mean? There is a true reality that, for me, gluten does not serve me. For me, it's not food freedom for me to "indulge" in something with gluten, because I'm going to feel like there are razor blades that are cutting through my intestines and I'm going to be constipated for four days and that means I'm going to be bitchy to be around. You don't want to mess with me, right?

To me, that putting handcuffs on me, right? I don't desire. I had enough of those oops decisions where I've been like, "That's not fun." But for me, something may be a flourless chocolate torte



or a grass-fed dairy ice cream, which I don't do dairy and the antianxiety diet protocol. We can unpack why in a moment, but dairy doesn't hurt me in the sense that I noticed any negative repercussions. But you do have to clean up your diet so that you can hear the whispers and the signals and the feedback of foods that you can determine what your good, better, best spectrum is.

There is definitely something to be said about in a vacation setting, a lot of people can tolerate foods that they can't tolerate in their general workflow. A lot of that has to do with the fact that their bodies not keyed up, right? Their body's HPA axis, going back, is more in a parasympathetic place. They're making four times the amount of digestive enzymes in a relaxed state, hence, arrest digest versus a stressed state. They're breaking down food particles more efficiently. Their microbiome is likely more optimized when they're not sending chronic signals of stress. So they're not dealing with these unmanageable cravings and they're not trying to numb the burnout that they experienced from their stressful day.

There's so much to be said about there is this huge pendulum swing, and I think that food freedom comes with restriction. It comes with being able to connect and listen to the feedback of your body and then absolutely be intuitive, but use whole real foods. In the sense of the person who wants to do gluten, go on with your bad stuff. I think sourdough is a cool thing. It's a traditional food and I think for some people it works really beautifully.

[00:35:56] AS: Yeah. No, I love that. Yeah. That's honestly why I'm like so fascinated with the emotional side of things, because I think sometimes with intuitive eating, as that capital I, capital E. Not, "Let's be intuitive eaters," which is what you're describing, but it's a route to get there, is I anything they don't have the depth of knowledge that you do, right?

From my lens, I look at the story and the emotional reasons people, they feel amazing and then they're like, "Why can't I keep this up?" Again, no one knows everything. But for people who are kind of like, "Okay, intuitive eating has got me kind of far, but I want to go further." It's



okay. I just want to give people permission to keep exploring if they're not satisfied with the outcome of like traditional intuitive eating.

[00:36:37] AM: Yeah.

[00:36:40] AS: All right. Well, we're going to take a break from our sponsor, but when we come back, I want to ask Ali about metabolic flexibility, how sugar impacts that, and natural sweetener. We will be right back.

[BREAK]

[00:36:52] AS: Are you ready to take action from this insatiable season and experience what it's like to be free of sugar craving? Enter Freedom From Cravings, a five-week live group coaching program that starts right after Memorial Day. If you've wondered why you can eat healthfully but still having 3PM crash that sends you even more in our quarantine times to your cabinet for chips or peanut M&Ms or why you can be good all day and then overeat popcorn or coconut ice cream while watching Netflix at night? Sugar rehab will show you how sugar cravings are a biology game, not a willpower or discipline game.

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I will be personally guiding through experiences and experiments to determine what your biology needs are to not only prevent sugar cravings all day and at night, but to also feel satiated, focused, optimistic and energized. Be prepared to be surprised and redefine what healthy needs for you and your body.

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[INTERVIEW CONTINUED]

[00:38:43] AS: All right. We are back with Ali Miler, who is helping us really unpack when sugar becomes addictive. Again, right before the break, I mean, I thought it was fascinating for you to talk about how when we're on vacation, we can metabolize sugar in a different way. It's almost like how we're more sensitive to sugar the last two weeks of our menstrual cycle. Like when we're on vacation, we're not as sensitive because of our body is working. If we're really relaxed, we're more parasympathetic dominant. I mean, that's fascinating for people to think about.

[00:39:12] AM: Most definitely.

[00:39:13] AS: Yeah. You had mentioned metabolic flexibility, and I would love for you to define that for people and how sugar can interfere with that.

[00:39:21] AM: Sure. I discussed metabolic flexibility in the constructs of the ketogenic diet. So maybe I'll just unpack a little bit of my philosophies and using a form of nutritional ketosis and where I find flexibility within often worlds of rigidity there.



Nutritional ketosis has very polarizing vibes associated with it. There're camps that are on and there are camps that are off. I think that we need to just take a step back and acknowledge the fact that the human body was designed to be a hybrid machine. We look anthropologically, if we look at the way that humans have survived, it's because of the ability to produce ketones when food sources were not secure and the whole hunter-gatherer philosophy, right? Any time that we aren't consuming carbohydrates, the body is in an absence of high carbohydrate intake and also depletion of glycogen stores, which is the storage of our glucose in our organs. We'll start to produce ketones.

Usually it's about 2 to 3 days of carbohydrate restriction, and most people will transition into producing ketones. A little bit of a misnomer there, some people think that when you make ketones, that you are going to have health hazard risks, which we only see with ketoacidosis, which is in an uncontrolled diabetic. Merely restricting your carbohydrates alone cannot physiologically put you into that state, and then also there's a disconnect of people thinking that when you make ketones, you don't have glucose for your thyroid or you don't have glucose for your brain or other organs of me. Your glucose levels don't zero-out. You wouldn't die to be clear if your glucose levels zeroed-out.

We have a process in the body called gluconeogenesis. We can make glucose from non-carbohydrates substrates. The body will always make enough glucose to manage the needs of its active tissues, but what happens is you get off of that roller coaster of blood sugar spikes and crashes of an individual that is not fat-adapted or making nutritional ketones.

If you're only using glucose as fuel and you're not carb restricting, every time you eat carbs, you release insulin. As I mentioned before break, your insulin can sometimes be overproduced. That's draws a the blood sugar crash. You then crave carbs. You eat more carbs and you're on this, again, roller coaster, big spikes, big drops.



When you restrict carbs to a level that your body starts to produce ketones, that blood sugar level tends to be regulated and kind of range more somewhere between like the high-60s to low-90s for the individual, whereas a standard American can have blood sugar spikes into the 300. That's kind of just a reference there.

One reason for doing a state of ketosis is that you get grounded blood sugar level, right? I just kind of established that you're taking out the mountain peaks and valleys and you're creating this is very regulated glucose stream for your system. Another benefit of nutritional ketosis is that ketones actually are homeostatic. That means that they yield hormonal influence in the body, and ketones cross the blood brain barrier.

We learned initially in the medical world of the magic of ketones in the state of epilepsy because of the fact that ketones cross the blood brain barrier and they can actually up-regulate GABA. GABA is an inhibitory compound that is very grounding. It takes that kind of white knuckle effect off of stress. If we're thinking of Parkinson's disease or epileptic seizures, it's that lack of GABA creating that tremoring in the body.

When you're making moderate amounts of ketones, you're getting a natural increase of GABA in the body, which can be very anxiolytic or anti-anxiety and grounding, and that's why I use the ketogenic diet in my approach for the anti-anxiety diet and the anti-anxiety diet cookbook. This is after 10 years of clinically using nutritional ketosis for an approach in my opinion of food freedom for people to stop craving and to deal with morbid obesity.

I initially was running a program as an alternative bariatric surgery and people are losing 50, 100+ pounds by just breaking up with sugar. I started to see over time that not only was that happening, but we are also seeing improvements in lipids. We were also seeing people with autoimmune diseases, getting off of their biologics. We were seeing inflammatory markers getting regulated. Then really wildly, we were seeing mood stuff shift and we were seeing these babies from women that were PCOS and infertile, and we know the connection now of PCOS



and insulin resistance and really dysregulated blood sugar metabolism playing a huge role of that puzzle. I started to explore that a little bit deeper and that's why I brought it in as a tool for the antianxiety diet. Now, I'll break if you have any questions, because I want to see how I can go too far, and that's where I'll define metabolic flexibility.

[00:44:24] AS: Yeah. No. Talk about it too far, because are you also saying everyone should be producing ketones/keto I guess is –

[00:44:31] AM: Yeah. I feel that we're hybrids, that we should all function and have the access to the magic of ketone production, and that it's a disservice to the human body to constantly stress the body with excessive carbohydrate and inhibit the ability of ketone production.

Now with that being said, metabolic flexibility comes in as a way for you to navigate how can you function as a hybrid without going too deep into nutritional ketosis that that might hinder your hormone health, or your thyroid, or your adrenals, or that it might cause on other ends like neuroses and addictive tendencies or over restrictive patterns? Because one of the things that happens when you're making ketones is when those ketones cross the blood brain barrier, not only does that support GABA, but that also provides leptin. Leptin is a primary satiety hormone. We think of leptin and ghrelin as the satiety and hunger hormones in our body and brain, and leptin is made from fat. Either these small intestine getting the presence of fat from fat consumption in the diet, which is why eating a higher fat diet is very satiating. That actually aids in leptin production in the body. Leptin is also made by liberating body fat as fuel. If you're losing body fat, you're going to be enhancing your leptin expression as well.

When we're talking about finding balance here, in an individual who runs low body fat or maybe who has had successful weight loss and has not that made that transition in their mind of what their new body is and they're still dealing with body dysmorphia and they're over restricting and not feeding their body with ample fat, or an individual who's running low body fat, not getting that secondary body fat liberation of leptin. Over time, we can see in women



that are menstrual, leptin is demanded at different times of our menstrual cycle and it tends to peak post-ovulation, as we're getting into that delightful luteal phase, right? Which is where mood is so much fun, mood management, and we see that leptin is higher demanded there.

I have been using in the last 3 to 4 years in my clinical practice and in my book carbs cycling as a way to create a leptin surge, because leptin and insulin have is very connected expression in the body. So I actually am looking to clinically kind of slingshot insulin response around like days 18 or 19 of menstrual cycle to get a leptin surge, and then potentially on days one and two of the menstrual cycle as more of an optional. But I find in women that are cycling and practicing more of a ketogenic diet, a lot of times because they're so satiated, and these are the women that are doing their spin classes, they're over-caffeinating, they're meeting there under-eating, under-sleeping. I know those people. They are so satiated with making these ketones that they forget to eat.

It might be a secondary inadequate intake. Maybe it's not a disordered eating in the mind state that it's white knuckling it, but it's just that they're just running and going and doing and they don't eat enough to nourish their bodies. Then they start to get leptin depleted, and that's when we can start to see some really significant impact on becoming un-ovulatory. We can start to see issues like amenorrhea. We can start to see, like I said, a little bit of freak out in the thyroid and the adrenals, because your thyroid actually has leptin receptors as well.

[00:48:01] AS: Wow! That's amazing.

[00:48:02] AM: Sorry. That was a big rant.

[00:48:05] AS: No. It's interesting. Well, I like it, because you're also adjusting, because I know what I've seen with a lot of my clients especially those who are perimenopause in their fertility years, like a lot of them actually often need more carbohydrates than they're giving themselves, and not processed foods, but like whole-grain, steel cut oats. You know what I mean? Whatever



it is. It's just interesting to hear that though. Again, I think it's depends on where you're starting from, right? Someone with PCOS is highly most likely insulin resistant already.

[00:48:33] AM: Exactly. It's kind of like they might do two months of tight keto before they start to explore their metabolic flexibility, especially if they're looking for fertility and they have an elevated DHEA, because the production of ketones also metabolizes elevated DHEA levels. There's reasons, and that's why we always have to come back to this N equals 1 of why someone would need tighter or looser and we need to be adaptable to that.

Finding metabolic flexibility is instead of doing this tight perfect pie chart of what the "ketogenic diet" is, 70% fat and been less than 5% of your calories from carbs, and the rest of it coming from protein, you get to define by eating whole real foods how your body is metabolizing. I know that if I am actually in too tight of nutritional ketosis, if I'm producing more than two in my blood meter, I am really high adrenaline. I'm like [inaudible 00:49:32], like bulldog, chest bumping people. Not good. No one wants to be – I'm not safe for human consumption at that level of ketosis.

I do way better with the grounding effect and still having some carb in my diet. For me, that looks like 60, 45 grams a day. That means that I would have in my dinner, I'll go with last night's dinner, it was a piece of salmon that we did on the cedar plank with roasted asparagus and Yukon potatoes with thyme and like a really yummy coarse salt and black pepper blend, and I did a third cup of the Yukon potatoes. To me, that's not carbs cycling. That actually eating in a state of metabolic flexibility and still I produce ketones at that level. There's not a yes or no food list. It's eating food that support your body's biochemistry and physiological process.

[00:50:22] AS: I love that. One thing that was shocking to me was when I was pregnant, I didn't want to do the traditional glucose test. So they had me monitor. My after meal numbers were like perfect, but my early morning ones tended to be high for pregnancy and they were like, "Oh! This is gestational diabetes." I was like, "I do not have gestational diabetes." They're like,



“Well, you’re over 40s. Sometimes the placenta can’t just keep up,” and they basically had me talk to a registered dietitian at the hospital. I was like, “What am I going to learn? I’m in this field,” but she had me add a carbohydrate at night, and it dropped my levels.

[00:50:57] AM: Oh yeah. Darn phenomenon. Yeah. Yeah.

[00:50:58] AS: I was like, “Oh my God!” It was summer and was as like eating a handful of blueberries before I went to bed and it like brought my glucose down. I was like, “This is wild. I don't know if this will keep up when I’m not pregnant,” but it was just – It’s so counterintuitive even to me, like adding more carbohydrates is going to lower my glucose in the morning? It was just very interesting to me.

[00:51:18] AM: Yeah. Well, in the first trimester actually, the pancreas increases pretty substantially in size in where it's putting 2 to 3 times the amount of insulin out into the woman's body, and that's why it's very natural. No. You weren't doing that testing. That was end of second trimester, but still it's very natural in the first trimester to feel a desire for more carbohydrates, because most women run more hypoglycemic because of that abundance of insulin and the body is putting out that insulin to grow a baby. Insulin is anabolic.

Definitely, it’s so much important. I always say, because then there’re the people that are really tight keto and they’re like, “Oh! I’m just craving an apple with almond butter.” Have an apple, man! Definitely. You need that apple. It’s a good thing. [inaudible 00:52:06]. Yeah. Yeah. Go crazy with yourself. Yeah, I mean, that’s where it’s like – Again, whole foods freedom I think is a good thing.

[00:52:16] AS: Yeah. Yeah. What is your thought about natural sweeteners like Stevia, or Monk Fruit is a new one. What do you think about those in terms of not only metabolic flexibility, but what we think of when we think of as like good or bad sugars, I guess?



[00:52:32] AM: Yeah. I don't see any health benefit to them. In fact, I see some health concerns to – I kind of put them all in the camp of non-caloric sweeteners. There's totally others “natural” non-caloric sweeteners, and then there's chemically-derived non-caloric sweeteners and that's like you're [inaudible 00:52:51], like your Sweet'N Low and whatnot.

If are looking at the natural non-caloric sweetener, the beef that I have is they're still very far from whole foods and not the franchise. I'm talking about a whole foods. Can you imagine it growing or all of its edible part is intact? What's been done to it since harvester or extraction?

If I'm looking at something like erythritol, which is a ketoer's best friend in many cases, it's derived from corn, and you would need a straight up Breaking Bad lab in your garage to derive an ear of corn into erythritol. You're just not going to do it, right? It's not possible to get that end product out of there. What's happening? A lot of chemicals centrifuging. A lot of additives to bleach and refine and spin and extract, and at the end of the day it's a multistep process that is very far from a whole food, and I would put more of that in the camp of a processed food.

Just the fact that it doesn't have “carbohydrate” doesn't to me say that that belongs in my body. Secondly to that, it may even create more metabolic dysfunction because it is creating that psychosomatic response in the body. It's like the Pavlov's dog. You ring a bell, you get fed. You ring a bell, you get fed. We actually have GLP-1 receptors in our tongue. These are sweet taste receptors. Glucagon-like peptide is what it stands for. When you taste sweet regardless of the amount of grams of carbohydrate consumed, when you taste sweet, your pancreas responds.

Like you're dingdong ditching your system and you are getting a taste of sensation of sweet. Your pancreas responds. Your blood sugar is going to respond calling your pancreas, and that's going to create metabolic stress tier system. Then the third and fourth reason of them is that they are bacteriostatic, many of them. If we're looking at even Stevia, the Halo one, Stevia is bacteriostatic. It's been in research to sterilize lactobacillus and bifido strains of bacteria, and



those are your favorable players that make your serotonin and GABA. Why would you want to kill them off?

Then the last one is – I don't have any feelings here, right? Then the sugar alcohols just create osmotic flushing. So now you're having loose stools and you're dealing with electrolyte instability and muscle cramping and other issues, increased thirst and whatnot. The last piece of the puzzle is it just doesn't reframe the relationship. It's like if you're using non-caloric natural sweeteners in all of your baking or eating keto ice cream or these no-sweetener added, but totally without those things, like even like a lilies chocolate bar, I much prefer the real deal at smaller amount because you're otherwise continuing to perpetuate that conditioning that sweet equals reward, sweet taste equals good, and this is something you desire. That means every time you're at a wedding, every time you're in a baby shower and there is not a non-caloric sweetener version of that food, you're white knuckling not eating that cake, right?

When I take the approach with whole real foods, I am looking at things like raw unfiltered honey. We're looking at things like dark robust maple syrup. We're looking at using dates. We're looking at mashing a banana. Each of those things are so much closer to a real food. Each of them have prebiotic support for healthy microbiome and each of them provide unique novel influence on our nutritional levels.

[00:56:31] AS: I love that, because that was going to be my question. So it sounds like it's better to go with like truly natural sweeteners that aren't no caloric, but that are actually whole foods like honey, maple syrup.

[00:56:45] AM: Yeah.

[00:56:47] AS: Yeah. No. That's so interesting. I love that you – I mean, when I was struggling with sugar, I mean, this was like 15 years ago. I use Stevia and I eventually just couldn't use it intuitively, but I wish I would've known what you just shared, because my gut was so messed up



and like it probably wasn't helping but I was like, "Oh! This is –" To your point, I was like, "This is free." You know how like in Weight Watchers, they have the category of this like –

[00:57:09] AM: A halo effect. That's what it is.

[00:57:10] AS: Yeah. [inaudible 00:57:11].

[00:57:12] AM: Oh, no. I don't use sugar. I just use Stevia in everything, my coffee. That's one of my favorite mantra is this channel savory. Again, if you want true food freedom, you have to rewrite your relationship with food, because if you can really rewrite your relationship with food, then you can absolutely eat intuitively and experience food freedom, because you're listening to the information that it's giving you. You're not muffling the data. You're not – It's not an abusive relationship where you're, "La-la-la-la-la," when things are going on, right? It's the same thing with food.

[00:57:44] AS: Yeah. That's what's so frustrating. Again, I looked at food through a weight loss and calorie lens for 18 years, so I get it, but it's so frustrating. I wish I would have known from the start to tune in from a health lens, right? Because you're still getting the data when you're trying to lose weight through – I mean, through a caloric lens, but you're not hearing, like you're not noticing what you need to be noticing to really shift your relationship to food.

[00:58:07] AM: Right, and you keep telling your body to shut up along the process. That's, again, one of the things where with this type of approach of clean eating diet, you may need more calories and that may alleviate the imbalance of the HPA axis that was driving the cortisol, that was driving the stubborn metabolism and the belly fat and the hormone dysfunction and the sleep disorder so you're not getting the REM cycle of your optimal metabolism and so forth, because you just released because you started listening. But when we white knuckle and when we tell our body to be quiet, often good things don't come.



[00:58:40] AS: Yeah, that's so. One more question. We've talked about big, like macronutrients, like fat, and protein, and carbohydrates, but you also really savvy with micronutrient deficiencies. What sort of micronutrient deficiencies contribute to sugar cravings?

[00:58:57] AM: Okay. We talked about glutamine, which is the amino acid, and that's the one that I kind of connected to the story of leaky gut, if you will. But there's so many. I mean, I break down in the sense of I guess cravings in general. I would even go beyond like sugar cravings per se and just say like cravings and mood imbalance. There is mood stabilizing minerals. There are B vitamins that play a role with activating as I mentioned or neurotransmitters, and then there's the really big importance is antioxidant. Antioxidants can play a huge role with not only supporting healthy cellular structure and reducing inflammation in the body, but they can also help with the way that our neurotransmitters are heard or the signaling patterns if you will, the receptor function.

When I think of B vitamins, the first the B vitamin I go to is B-6. This is the most known cofactor or activator especially when we're talking about production and serotonin and GABA, which I keep going back to. Those are our landing years for our stress response. If we're feeling that we're always having impulse control issues or craving, often we need to give a little more love towards serotonin and GABA.

B6 or pyridoxine, we're going to see this in our darker poultry. So like the bone and skin on chicken thighs that I ensure that I include with in the book, and the other thing that you get when you do bone in skin on is you're going to get glycine. Glycine is a really powerful amino acid. We have seen maybe forms of magnesium out there called magnesium bisglycinate. Glycine helps with neuromuscular release. So like that tension you hold in your jaw or in your shoulders or your neck and you feel kind of that tautness.

Bone and skin on meat is fantastic, because you're getting that pyridoxine. You're getting that glycine, and you can also get the B-6 from banana, so the redeeming factor of what I think is



demonized in the low-carb world. We see this also in most of our protein, so salmon, tuna, chicken, beef, you name it, but higher if you're doing poultry and the darker meats, which had been demonized for so long in the low-calorie world, right? Like, "Only the lean meats."

We see that big picture. It goes full spectrum of when you're eating a whole real food, get as close as you can to all of its edible parts intact, because when you're doing chicken, if you're breaking down the whole chicken and you're getting all of its parts and then you're using the carcass and the bones for your bone broth and you're getting more than glutamine, if you're using the skin and eating that, you're getting that glycine. You're going to get more heme iron in the darker poultry meat. You're going to get more carnitine, which aids in body fat burn in the darker meat, and you're going to balance out your inflammation in the body. We see that we actually have higher levels of methionine and that can elevate homocysteine, which is a vascular marker of inflammation when we eat just meat, the muscle meat and we don't get the connective tissue and we don't get the fattier cuts. You're getting both, again, that kind of like prevention of imbalance and then you're also getting the abundance when you're going closer to the whole real food.

[01:02:06] AS: I love that. I love that, because again if you focus on like nutrition saturation is what came to mind, it sounds like you can get a lot of those micronutrients.

[01:02:16] AM: Yeah, almost definitely. I mean, that's why I am a big fan. I mean, you'll see, I actually have a table and the anti-anxiety diet cookbook. I break down B-12 would be another one I'd go to. Magnesium I already mentioned, but that'd be a big mineral of focus, because we burn through magnesium with stress. So we're looking at like leafy green and nuts and seeds, cacao, dark chocolate, it's always a fun thing to have a prescription for. That would be included in that world. Then there is blood sugar metabolism nutrients, like zinc and chromium. But all of these, really, the first place to start is honestly a lot of this is in our meats. That's why full circle, starting of thinking the world would be a better place to vegan. I really found as I transition to more ancestral approach of eating, and again not just eating. It's a totally different world if



we're talking about processed meat and we're talking about COFO, confined animal farming operations. I'm talking about a snout to tail approach and really trying to find the best sourced quality as possible, but this is where we find the most nutrient density, and I think that it's an absolute piece of the puzzle of whole body healing. People ask me, "Can I do your antianxiety diet as a vegetarian?" My question always is, "Are you willing to do eggs? Because you need choline." Choline is such an important piece of the puzzle for acetylcholine, which is our conductor of our neurotransmitters. It's like the wire of our telephone communication.

We need choline, and that's found in liver, and that's found on egg yolk, and choline is super important for fertility. We're seeing it to be just as important as folate when we're talking about neural tube defects and cognitive function of babe in the embryo. I always ask, "Will you be open to having eggs or dairy so we can get grass-fed whey with immunoglobulin and fish? If so, totally, you can rock and roll with it." But I do believe that a lot of these biological compounds are more nutrient-condensed and more compact delivery of what we need and require.

[01:04:19] AS: Yeah. That makes me think. We're just starting my son on solids and I want to get some liver for him. I'm like, "I don't eat it, but hopefully he will, but I'll learn to eat it if he does."

[01:04:31] AM: Exactly, if we start them young. My husband always gets me – I found that 3/4 to 1/4 like a pretty doable ratio. Meaning, like three quarters the ground grass-fed beef to like 1/4 of ground organ. That seems to work well. Yah, and then we'll do like – We have a bacon meatloaf on the blog, which is fantastic. I'll send you the link. You can share. We do that for burger patties or like a base of a Bolognese if you're adding tomato sauce or tacos or you're adding cumin and a bunch of flavor enhancers. That quarter tends to go over really well without having that medicinal kind of metallic flavor profile.



[01:05:05] AS: I love that. Yeah, our coop have this package of liver with grass-fed beef and they must have used that percentage because I could barely – I didn't even taste the liver and I was like, "I got to get that again."

[01:05:15] AM: You can handle it. Yes.

[01:05:17] AS: It's crazy too because people think like, "Ooh! The environmental impact," but it's like – When I was in grad school, I went to Sweden, and the environmental impact of regenerative farming in grass-fed farming is so different. It's a lot more nuanced than people think. I studied a natural – It's called a natural step, but like an environmental sustainability framework over there and it like totally changed my mind about what is really sustainable. That's a whole tangent, and know we're running out of time.

[01:05:42] AM: I know, but that helped me in my "recovering process", because I was confronted in – I had a ferritin count that was at 2 and your hair starts to lose when it goes below 60 and you can't regrow here until ferritin goes above 80, and range is generally healthier in the hundreds, right? I had a ferritin of 2. I was also anemic and obviously with level iron storage, and I had clinically low little B12. Like I said, "I was just finishing a stint of raw vegans. So not even like sprouted legumes and such, and I had such severe brain fog and I think a lot of the autoimmune flare from the history of the more inflammatory, like I said, analog foods, but I had to make peace with it. It was like, "Okay, if food is medicine, you guys just wrote me a script for nine supplements," which I'm a big fan of nutritional supplements as well, but I was like I have to – I know that the amount of iron in spinach is in a non-heme form, not a biological form. I know it's [inaudible 01:06:39] versus ferrous form of the non-heme. Yes, I can add lemon to enhance the vitamin C to help with my iron absorption and I can cook it in a cast iron, but I know what I really need to do.

I actually had to go to a ranch and not participate actively, but watch the slaughter process and see it done respectfully and talk to regenerative farmers and learn about how they can actually



enhance soil, which is one of our biggest concerns for food security. [inaudible 01:07:07] depletion, and learning about the connection of biodynamic farming of the fact that, yeah, the chicken scratch through the feces and they laid their nitrogen and there's this whole circle or cycle of food production that is really broken right now when we're talking about industrialized production. I think that that getting back, going back to go forward is often the answer when we're talking about the human body, food system or really anything.

[01:07:34] AS: I love that. I think that kind of encapsulates a lot of what we talked about. You got to go back and learn.

[01:07:41] AM: Yeah.

[01:07:42] AS: Why you're feeding the beast to go forwards.

[01:07:43] AM: If we went back to go forward, then all food freedom would be fine because we wouldn't have chemical shitstorms interfering with the signaling of our brain making us feel handcuffed to industrialized foods and being food addicts and dealing with comorbidities and all the things. I think, yeah, it's just redefining what is real. What happened? Where was the wrong turn? We got to get back.

[01:08:04] AS: Yeah. Ali, this has been so wonderful. I have learned so much. I can't thank you enough. We will have a link to your website. Where can people find you in social media? I love you on Instagram. I highly recommend it.

[01:08:15] AM: Thank you.

[01:08:17] AS: But is there anymore else? I mean, please let people know your handles or where you hangout.



[01:08:20] AM: Yeah. We keep it super simple. Everything is just Ali Miller RD. It's A-L-I-M-I-L-L-E-R-R-D and @alimillerrd on Instagram and my website is alimillerrd.com. That's super simple, and the book is The Antianxiety Diet, which is the nonfiction, link deep dive science read. Then last year I came out with The Antianxiety Diet Cookbook, which does standalone if you want a little lighter load. You guys know I kind of talk like a high-powered hose now, so you can choose your adventure there, but they were complementary and they also can function independently.

[01:08:57] AS: And you have a podcast.

[01:08:58] AM: Yes. Yes, and the podcast is called Naturally Nourished, and we are on our 188th episode. So lots of content over there.

[01:09:07] AS: Wonderful. Thank you so much for coming on this show.

[01:09:10] AM: My pleasure. It's been fun.

[END OF INTERVIEW]

[01:09:15] AS: Thank you, health rebels, for tuning in today. Have a reaction, question or want the transcript from today's episode, find me at alishapiro.com. I'd love if you leave a review podcast on Apple Podcast and tell you friends and family about insatiable. It helps us grow our community and share a new way of approaching health in our bodies.

Thanks for engaging in a different kind of conversation. Remember, always, your body truths are unique, profound, real and liberating.

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