

Best of 2021 Episode: Bonus: Upgrade Your Energy with a Hormone-Gut-Immune Trifecta – Dr. Amy Shah

Dave:

Today's guest is someone who just did an IG Live with me about her new book and it's on the Dave Asprey YouTube channel. And she was an early guest on the show up, so 257 on toxic mold, intermittent fasting and vegan versus low carb. She's a medical doctor. Her name is Amy Shah, double board certified MD with allergy and immunology focused hormones, gut health. And she wrote a book called I'm So Effing Tired, which is exactly how I felt when I weighed 300 pounds.

Dave:

And it's exactly how probably three quarters of people feel right now, but we put one foot in front of the other. So we share some common thinking and some areas where it isn't the same, but it's directionally similar. So we're going to go deep, okay, what are the causes of why you're tired and what do you do about it?

Dave:

Dr. Shah or Amy is, I'm going to call you, welcome back to Bulletproof Radio. It's only been 600 episodes since you were on.

Dr. Amy Shah:

I know. I'm so glad to be here. Thank you so much. There's people who still reach out to me from that episode and say, "I heard you on Dave's podcast." I know how impactful your podcast is, so I'm so glad to be here. Thank you for having me.

Dave:

You're welcome. And by the way, I'm pretty choosy. I have this rule, a doctor has to graduate magna cum laude from a big school. Oh, you did that, so okay. But you're very well qualified to come on the show. Just to be really clear-

Amy:

Thank you.

Dave:

... you come from the cream of the crop in terms of education and background. And just the way you think, I think is worthy of sharing with people more than once. So thanks for putting it out there in a book that's accessible. I want to know, were you so effing tired? Is this part of it?

Amy:

Actually, this is exactly what happened to me. For far too long, all of our concerns about why we're so tired just get brushed off. If you don't show up as visibly sick and failing on a lab test, you're basically pushed aside and said, "Okay, it must be, you are getting older, you have a busy life." For women, it's like, you're a mom, you're trying to do too many things. And nobody really gives us any direction, we're left to our own defenses.

Amy:

And what I found is the studies back that up, only 3% of people who go in for fatigue or complaints of tiredness, even getting a diagnosis. And 3% is by the way, is any random person walking into their doctor, and the chances of them diagnosing any problem is the same chances of you complaining of severe fatigue on a daily basis of getting an answer. So 3%. I was in that 97% that didn't get an answer and I knew that there was something wrong, but I couldn't put my finger on it because like I said, nobody could really tell me.

Amy:

So I started to look into, what is this? Is this gut health? Is this hormone health? Is this immune health like inflammation. And long story short, what I learned for myself, I shared on Instagram, and through my blogs, and podcasts, and that's what came together in this book. What I learned is that energy is a combination of all three things, gut health, hormone, health, and immune health. They're talking to each other at all points of the day.

Amy:

I had no idea that these three areas communicate and they talk to the brain constantly. And if any of those are broken, then you're going to be tired. And so things like short fasting, circadian fasting, sinking with nature and circadian rhythms, which is our internal clock and eating the right foods really can make a difference. And of course, there's this whole component of mind, body health, which we sorely miss in Western culture. So what you eat, when you eat and mind-body health were the three things that I came up with at the end.

Dave:

Let's start with gut health. It has been even more of a focus just over the last 10 years, the work I've done with Viome and just on the anti-aging book. Clearly there's types of bacteria, number of bacteria, time of day, soluble fiber, insoluble fiber, which proteins, which things poke holes in your gut. I think I've got it kind of sorted out in my mind and I do my best in my books, but give me your MD carefully. You studied immunology and all that kind of stuff, give me your shortlist, what the heck is going on with our guts?

Amy:

Dave, it's funny because the microbiome research is so new that a lot of this is not stuff I learned in med school and probably that you didn't learn until probably in the last five or 10 years. Viome is one of the companies that are at the forefront of this, and so, one of the things I learned from them, and then I found out the research studies to be so true is that the immune system is constantly in conversation.

Amy:

It's like, they're on these like walkie-talkies back in the day when we didn't have cell phones, but the instant. Instant talk between the gut bacteria and the immune cells. "Hey, Dave just ate something really weird, I don't recognize it. I need you to come here and check it out." They create a little bit of inflammation around the food that you just ate or the toxin or whatever you just ingested. And it tells the brain, "Hey we need to slow down because we need to figure out what's going on here."

Amy:

And this is exactly why inflammation causes fatigue, because when you have a lot of foods or toxins that you're ingesting, your gut bacteria are constantly telling the immune system, "Hey, there's some weird things here we don't recognize. These are not food items, these are not safe. I need you to come and help me figure this out." And when they're working as a team together and they realize that there's some danger or some things that they need to take care of, they send the brain a signal like, "Hey, there's a virus, bacteria, or we are dealing with this unknown food substance, or toxin, and we need to slow down so that we can fix the problem."

Amy:

That's why, when you feel sick, that inflammation signal is what makes you tired and makes your body know that it's time to rest and repair. So gut health is at the key. What you eat and how your gut communicates is the key to fatigue and getting your energy back. And you know, Dave, as much as anybody, I know you've told the story, but when you were unhealthy, 300 something pounds, you're always tired because your body was in a constant state of inflammation, and inflammation is fatigue.

Amy:

The brain gets a signal that we need to slow down because we need to fix the problem here. So if you're trying to really improve your gut health, it starts with what you eat.

Dave:

Isn't it somewhat what you don't eat?

Amy:

Yeah. That's true. What you eat-

Dave:

Five worst foods for your gut, what are they?

Amy:

Five worst foods for your gut, sugar, and we're talking about the type of sugar that we get in our Western world, not necessarily from your blueberries. We're talking about processed gluten, not necessarily just gluten, just processed flours in general, but gluten is probably the number five by and far, the number one processed flour that we consume. Processed-

Dave:

So you're saying, even if you don't have celiac disease, it's bad for your gut.

Amy:

It can [crosstalk 00:08:33]-

Dave:

News flash, yes it, guys. I know you said and I'm still like, "It doesn't matter." Gluten is just-

Amy:

Doesn't matter.

Dave:

... not a good food, unless you're starving to death, in which case it's better than starving to death, but it's just never good for you. Am I overstating the case?

Amy:

If 99% of our gluten isn't hyper processed in the form of cakes and cookies and crackers, we can make an argument that if you lived in the rural Sardinia and you're able to make cracked wheat bowls with veggies, you can argue that it can be a part of a healthful diet. I definitely could argue... somebody could argue that. And so there's never 100% on anything, but we live in a world where if you take out processed flours, and basically that means gluten, you are going to be doing favors to your gut health.

Amy:

So sugar, gluten, and then we go to processed dairy. Dairy is a harder one because for most people, many people, whole dairy, raw dairy, unprocessed dairy can be fine, especially in forms of hard cheeses or yogurts and cultured kefir, et cetera. But when you're talking about typical process-

Dave:

Why not soft cheese? Why hard?

Amy:

Hard cheese has less lactose and it's easier to digest. When we're talking about gut health, you really talk about the... You can definitely have some really good raw, soft cheeses or unprocessed, but hard cheeses actually naturally take out a lot of the gut irritants, the lactose. Tends to be one of the first foods that people can add back if they've been avoiding dairy for a long time. So one thing I'll tell you is, all these foods if you fix your gut, you can start to add them back in small amounts and you'll notice, oh, actually, I can tolerate this here and there now that I fixed my gut. So dairy is that.

Dave:

Let me ask you, from that perspective, I go with you before we finish your list. Over the course of the years, I've gotten myself, "Okay, I'm super healthy. I feel really great." And it's, "Okay, I can handle it." And then I added back in and I have just a little bit, can I have a little bit? And then I have a little bit, I'm like, "Oh, actually the next morning ago, the skin doesn't look great or my low back is sore," or whatever.

Dave:

And it feels like every time I do that, I'm punching myself in the face. And I finally was just like, "You know what? These aren't compatible with me. Just the fact that I can tolerate it, it's still taking something away from my vitality.

Amy:

Oh, 100%.

Dave:

Is that common?

Amy:

Yeah, 100%. That's what sugar, right?

Dave:

Yeah.

Amy:

If you think about it, Dave, we all know, most of us now that are in tune, people who are listening or watching right now, most of us know how crappy we feel after we have a big night of gluten, or dairy, or sugar. But we still choose to have it in small amounts in certain times of celebration or in... So, what I say is when you fix your gut in a real comprehensive way, you can have small amounts of each of these foods if you choose without really-

Dave:

Because you can take a hit without feeling it, is what you're saying.

Amy:

Exactly. It's like being punched-

Dave:

But you're still taking a hit, is not good for you.

Amy:

Exactly.

Dave:

Okay.

Amy:

It's like being punched in the face like you said, but you can recover because you're not getting punched every single day and every single meal. But the thing is, our brains are wired to like sugar. We are literally born liking sugar, so it's not so crazy to say, "I have something sweet here and there." You're not failing because your existence was created to wire your brain to want to have more sugar because sugar releases the dopamine and the serotonin and we created memories around sugar even.

Amy:

And it's learned behaviors from when you're a child, so these are hard foods to completely get rid of, all three of those. I grew up in an Indian upbringing. I was an immigrant and dairy was literally a huge part of every meal. There was a yogurt, there was milk, there was cheese, there was fermented. It was everything. So for me, I really, really struggled with completely going zero with dairy, so I have it here and there. And just like you, if I don't go off the deep end, I'm okay.

Amy:

But if I have it and I'm doing multiple doses of it, then I definitely feel a difference in my energy levels and my gut health, my bloating and my skin. Those are real big factors. Those are the big three. Okay. Then processed oils. I think that may even be-

Dave:

Yes.

Amy:

... number two after sugar. I think I just skipped over it because it's something we don't hear as much. These oils, literally every restaurant and every fast food, not even just fast food, just restaurants in general, we're literally consuming oils that have been oxidized and contain trans-fats. This is the reason that we are aging ourselves, we're feeling lethargic, we are gaining weight, we're feeling inflamed, all of the above. How do you feel about...

Amy:

I know you're a big fan of oil in general, but I think processed oils, the wrong fats do a lot of harm to our bodies.

Dave:

For 10 years, bulgur diet has been low omega-6.

Amy:

Yes.

Dave:

You don't have to get rid of it entirely because you can't, grass-fed beef is around 2% polyunsaturated oil. So you should stick to around 2%. That means you can't drink olive oil, but you can have a tablespoon of high-end stuff here and there. But you actually watch it and you just stay away from the other garbage oils that are mostly sold. I think it's more important than sugar, to be honest.

Amy:

Yeah, I think it's right up there.

Dave:

If you don't need omega-6 oil for two years, half your cell membranes get made out of good fats, and then you can eat some sugar and your insulin receptors work magically. But it's not, tomorrow I can have a ton of sugar because today I didn't have omega-6 oil. It's a time thing.

Amy:

I think the omega-6 oil thing is something that the general population really doesn't realize. They're doing everything right, but then they're eating out at restaurants that use traditional vegetable oils to cook. They're eating high heat, those foods at high heat, which is really, really inflammatory to their

bodies. This is why fried foods gets a bad rap because of course, if you're frying a food and at high heats with the wrong oils, that's just a ton of basically inflammatory omega-6 doing your gut no good.

Amy:

Those are the big, big ones. Of course, we have many, many, many toxins, and we could go deep, but those are like... If you take out those four I think you're in pretty good shape. If you can get control of that type foods, because the other stuff is really-

Dave:

There was sugar, grains-

Amy:

Dairy.

Dave:

Sugar, grains, bad oil and dairy.

Amy:

Yeah.

Dave:

Butter I'm guessing is okay, because it has no lactose.

Amy:

Ghee and butter are the dairy that I think are allowable in small amounts. But depending on your history, like if you have cardiac disease, a triple bypass or whatever, you really do have to watch even your oil consumption, but accepted... That's where I think people get confused, so in the medical world, they say, "No oil," because what they're looking at is the data from people who've had severe cardiac disease, caths, et cetera. So if you're in that group, then you really need to watch-

Dave:

The Dean Ornish basically.

Amy:

Yeah. If you're in a group of you already had a triple bypass, you should not be adding fats to all your foods. There's a difference between someone who's healthy, exercising, active, and someone who is really suffering with major inflammation of their arteries. And really just one, if you could think about it as like one more dose of inflammation could put them over the edge. And you'd really don't want to play with that.

Dave:

It's interesting. You and I probably don't agree on that because all of that advice comes from Dean Ornish who studied meditation and mindfulness with a crap diet that allows some vegetable oils and lots

of sugar. "Oh, look, it's good for your heart." But if you take out the diet, you get the same results from the meditation. So I'm like, "Show me your C-reactive proteins. Show me your Lp-PLA2."

Dave:

And if you eat butter or whatever other fat, and those go up, then don't eat the butter or fat. But if those don't go up, the butter or fat's probably going to make your mitochondria healthier. Am I nuts for thinking that way?

Amy:

I agree with you. I think that there's definitely some room... Here's the thing it's different for me and you probably... I'm not sure about your personal history or family history, but if you are not someone who has a severe cardiac history personally or family history, you're in a different category.

Dave:

My dad had a double bypass and I'm in the top 7% of cardiac risk genetically according to the DNA company.

Amy:

Oh, interesting.

Dave:

But I monitor my markers, and funny when I do this Bulletproof thing with 50% or more of my calories from saturated fat, all of my cardiac markers are really good, but when I go on a low fat diet, they get worse.

Amy:

I'm not a believer in eating a super low fat zero oil diet, for sure, but I do think that you really do have to watch the quality of your oils, because what happens is-

Dave:

Yes.

Amy:

... you, Dave own a company and you have access to all the best oils. The typical person that I see in a clinic or I'm talking to, they think of eating high fat as being able to go to their favorite fast food restaurant-

Dave:

Have French fries.

Amy:

... and have French fries and order the processed meat without the bone and they're consuming-

Dave:

Not the same.

Amy:

... a ton of unsafe fats. And so that's, I think where it gets hairy, because if you take this on a population level, you have to get people to buy into, or restaurants, or governments to change the quality of the fats that we're using. Because if you just put someone who has minimal control or education around it, you're going to get someone who's eating a ton of inflammatory foods.

Amy:

That's why I think the gluten thing works for us, like when you tell someone, "No gluten," they automatically can't eat the cakes, and they can't go to Krispy Kreme, and they can't go to Pizza Hut, and they can't... And like half the battle is getting you out of those places and getting your brain to not be addicted to those places anymore. The dopamine circuit that are hijacked.

Dave:

That's smart.

Amy:

Yeah. The dopamine circuits are hijacked in our lives. When you were a kid and your dad or mom brought you to a certain fast food place, say, McDonald's, I'll just take easy example. And it lit up your dopamine receptors and released all this pulse of dopamine. Your brain remembers that experience and it wired you to want that experience again. So if you think about it, evolutionarily makes sense.

Amy:

You're walking past, you're walking in your forest, jungle and you see a bush full of berries. And you're not even hungry, really. You're just walking around, but you see this bush full of berries and it's beautiful, and it's juicy, and you eat it. And every time you walk that path, you will stop in your tracks and search for that bush. And it doesn't matter if you're hungry, it doesn't matter, your dopamine receptors are need to remember that because it's helping us to survive, right? Saying-

Dave:

Yeah.

Amy:

... "Hey, remember that bush, if you ever get hungry or if you ever need it, you got to go there." But unfortunately, now it's McDonald's, and now it's those things.

Dave:

It's so weird, after probably five years or so, it would be my guesstimate, your brain remaps. And people say, "Oh, it's by the McDonald's [inaudible 00:21:04]," I'm like, "I don't know where that is." And like, "How could you not know where McDonald's is?" I'm like, "Because I don't see it." I drove past it and my brain doesn't identify it as food or useful. So it gets erased from my map. It's the weirdest thing, but-

Amy:

It's great, right? It's amazing-

Dave:

Yeah.

Amy:

... how we can reprogram our cravings and our body to want different foods based on how we get... You want to get a dopamine release and you want to get a serotonin release from the foods that you eat, but it's going to be different from the dopamine release that you used to get when you were driving through those process food companies. So I think that if you took out those four foods that we talked about for say a month and started to see how you feel and improve your gut health by doing other things like intermittent fasting, like sleeping, like seeing sunlight.

Amy:

Spending time in nature, doing a little bit of mindfulness, getting out of your to-do list. These things can transform your gut health and then in turn transform your energy levels and your long-term health. So when we talk about anti-aging, these are anti-aging activities and foods.

Dave:

I did something this week. There's a local restaurant that has grass fed stuff that's open with a patio, because apparently patios are safe where I live. Don't ask me why, compared to other things. But they brought me my grass-fed steak with a huge amount of French fries. Okay. This is a high end place, the oil probably is fresh, and I'm like, "I'm going to throw this away. I'm not going to eat those." I know exactly how I feel afterwards. My son, he's lectin-sensitive potatoes and he knows it.

Dave:

And he already ordered something that had another lectin in it that he knows. I'm like, "Look, you're getting old enough to feel your own pain." Here he eats a few French fries, eats the other thing, and my daughter is not lectin-sensitive, I'm like, "You can eat them, see if you get pimples tomorrow." I'm like, "You get a dose of your own medicine." My son's like, "I feel pretty okay." I'm like, "Yeah, that's funny. You have muscle knots where you didn't."

Dave:

And then a couple of days later, he gets stung by a wasp and it swells up like no one's business because he has systemic inflammation from his food and I'm like, "Tee-hee, see what you did?" And then the next day he eats more bad food, which... They've never been allowed to do this, but I'm like, "Look, you're going to be a teenager, you need to understand if you put yourself in the face, it hurts." Then the day after that he eats more stuff and then of course he gets hives because his immune system's already active.

Dave:

So now I'm asking you as immunologists and for all the medical stuff like that I want my kids to be able to feel the fact that they're digging a hole and like, "I did it once and it didn't bother me, therefore it's safe." And adults have that same thinking. And so I was trying to find an analogy like you're digging... You don't want to hit the water table when you're digging because then you're going to fill up and drown.

Dave:

So you're digging, digging, digging, and then something unforeseen happens like a wasp and there you go. Now, you're going to feel like crap for a while.

Amy:

Absolutely.

Dave:

Is that a good analogy? And how much damage do you think I did? I don't think it was much, but-

Amy:

I feel like you're talking about my kids because my kids are 11 and 13, and I don't believe in completely restricting and being controlling on their food. I just think that it can have the opposite effect. You all know that there is data that shows that being too controlling with their food can almost, especially with teenagers cause an opposite reaction. So I do the same thing, I let them experiment, see how bad they feel when they feel like they're bloated, they are inflamed.

Amy:

And during this time, allergies are a perfect way to know if you are inflamed because a lot of people, and this is not true for everyone. There are people who have allergies who are eating healthy and doing everything right for them. So no, giving them the things that make them inflamed is a part of our process. Think about both of us, I ate inflammatory foods for most of my life until about 10 years ago. I was a nutrition major in college, yet I bagels and I would take at the bagel shop.

Amy:

There was like this jelly bean like canister where you... It was called Jelly Bellies and they had all different flavors. Each bin was a different flavor.

Dave:

I remember Jelly Belly.

Amy:

And then you took a bag and then you scooped in like all the different flavors. And literally I would eat my bagel, I'd have my juice or whatever, sweet drink. And then I would take a bag of Jelly Bellies with me so I could study. And I'd sit there, and I was thinking to myself, I'm like... And I was studying nutrition. That is so sad that that was considered... And I have to say, Dave, at my conferences, my nutrition conferences, they had breakfast cereals, they had donuts, there was muffins.

Amy:

It was sponsored by all the big companies that you know now. And I don't know, things have changed. This was 20 years ago, but-

Dave:

Probably not. The American Dietician Association, they're straight up in league with the American Diabetic Association to cause diabetes, and like they're like, "I'm licensed. You should do what I say." I'm like, "Dude, you weigh twice what you should weigh. I'm not doing what you do or what you say. I'm sorry. Show me a healthy dietician who's registered." There's like 10 of them and they're functional.

Amy:

Here's the thing. My parents came from India. They weren't eating breakfast cereals in the morning. They were walking a ton. They were eating meals with friends and family. There was no soda and sweets were for holidays just because they're expensive and special. And then we moved to America and there was Coke in our home, we have Pizza Hut. They no longer made hot breakfast, it was sweet cereals, milk, juice. You can imagine what happened.

Amy:

Basically my dad was diagnosed with diabetes in his early 30s. Yes, I have a family history of type 2 diabetes, heart disease, all inflammatory disorders, but this happened literally within five years of moving to the U.S. And he has five brothers and guess what? Each of those five brothers were diagnosed with diabetes type 2 and heart disease. And so this is like an N of five, but you can just see how drastically you can change your life with just food.

Amy:

Eating around the clock. One of the things we talk about is intermittent fasting and in India, even just 10, 15 years ago, most people didn't... There was no eating late at night, there was no 24-hour. Still isn't mostly, but there's no 24-hour drive-throughs. Nobody's eating dinners at midnight. Basically you ate your dinner, and after sundown, you just eat something really, really small or nothing at all.

Amy:

And then you slept overnight, and then when you wake up, you didn't eat first thing in the morning. You did your work, you got things ready. And then maybe an hour or two, maybe three, you would have your first meal. And so it was just this classic, very natural intermittent fasting that we've just lost.

Dave:

In fact, you're reminding me of Satchin Panda, whose work I feature in a couple of books, who's been on the show. You probably know Satchin.

Amy:

Yeah, I love his work.

Dave:

He obviously, also from India, very circadian, Salk Institute, circadian-studying kind of guy. And he talks about how his mom in India, he's like, "Just don't eat after the sun goes down." And after two or three months, her type 2 diabetes resolved just from changing the timing of food. And you talk about circadian fasting in your, I'm So Effing Tired book and you call it... What do you say? You say it's the fountain of energy no one knows about. So really, it's all in that universe. What does it do for your energy and what you write about in your book?

Amy:

It's the one thing, Dave. I would say that maybe you've heard of getting rid of process oils, gluten, dairy. But the thing that I found was life-changing for me as a physician, as a nutrition major, as a wellness expert, was this concept of living with circadian rhythms. I found that to be life-changing for myself. So that's why I talk about it so much because it's free, it's accessible, it's mixed so much scientific sense.

Amy:

The Nobel Prize in medicine went to the biology of circadian rhythms, affects 80% of our genes. And so getting sunlight in the morning is so important, because when you get light through a small light in your bedroom, or an overhead light, you're getting about maybe 500 lux or 800 lux, and maybe 1,000 if you have like bright, bright, fluorescent lighting. When you go outside, even before sunrise on a cloudy day, you get 10,000 lux. And on a sunny day you get 100,000 lux.

Amy:

And this is literally telling your retina to signal to your brain that it's time to wake up, be energized, start that circadian clock, start metabolism and start like focus and energy. That's why you feel so good when you're on vacation and you get a big dose of natural light in the morning. And when I tell people that, they're really shocked. So many people have messaged me and say, "I live in a place that's really hard to get outside," or, "My schedule doesn't allow for it."

Amy:

So I really realized that even something as simple as getting bright light in the morning is really difficult for Americans. And then the same issue happens late at night. I said, two to three hours before bed, so say like around sundown, maybe a little bit after sundown, two or three hours before bed, stop eating. I was addicted to food too, I get it. I couldn't go more than an hour or two without eating, so I get it.

Amy:

If you stop eating at 7:00, a lot of us will feel like around 9:00, 9:30, you'll feel that tinge of life. I want a snack, I want to eat something before bed. It's because our bodies are on the sugar roller coaster. So try to push through, if you can, or you have a tea, or coffee or something without many calories. I allow up to about 40 calories as long as it's not sugar. And then you sleep. You sleep good eight hours, you wake up, maybe you do a fasted workout in the sunlight.

Amy:

And that alone will fix so much of your energy, gut health, immune, and hormone issues. That one thing, if you get nothing else out of this talk today.

Dave:

It's ridiculous how important fasting and sun exposure is. That's one of the reasons my company, TrueDark has the glasses that are patented with multiple filters. I wear those every night because they get more deep sleep and then I wake up and I feel good anyway. And then I get some sunshine and move a little bit. I do this except in Canada, where I can't because it's winter. I have 240 Watts of halogen lights, which are shining on me right now. And all winter long, I do that just to get enough lux in.

Dave:

It's less about the frequency or the spectrum than it is about the brightness, so it's doable. But if you're sitting down under fluorescent lights and LED lights going, "Why do I feel like crap? Why am I so tired to effing tired?" To the title of your book, it's the combination of light, and food timing, and what you eat. I love the way you've laid it out in your book, but you also talk about hormones in a way that I didn't talk about in my book.

Dave:

And I think that you should share that with the audience. Tell me about like cortisol, and testosterone, and estrogen and thyroid and the stuff. Walk me through your thinking about that, because those matter. I just didn't put in my fasting book.

Amy:

Yeah, exactly. For anyone who is wondering about how hormones work, I laid out to you exactly how I understood it finally after so many years of learning about hormones. Because everybody teaches you about hormones and these pieces like, "Oh, here's thyroid hormone. There is adrenal hormones." And we think of these as like all these separate systems. And so the way I learned about it is going to blow your mind. Now, you are going to learn how hormones work finally.

Amy:

What happens is that there's a master hormone that starts the entire cascade in your brain. It's called GnRH, Gonadotropin-releasing hormone and it's a pulsatile hormone. And that hormone is really sensitive. It's sensitive to stressors, emotional or physical. So too much working out, too much fasting, too much stress in your life. All of those things can throw out that pulse and that pulse will stop being so regular.

Amy:

That's why we get so many hormonal imbalances from stress and from over exercising or over fasting.

Dave:

So-

Amy:

Yeah.

Dave:

Oh, sorry. I thought I heard a pause to interrupt you. Didn't mean to talk on you. Tell me how to control my GnRH.

Amy:

Your GnRH is of the master controller of your hormone. You watch the stress level that's happening in your body, whether it's physical or mental, emotional, all of those stressors will stop that pulse. So it makes sense, Dave, if we were in a time of famine or war, your body does not want to procreate. It does not want to have babies. It does not want the hormonal functions of our body to create a child or pregnancy during that time.

Amy:

This is even more wired in a sensitive way for women because of that. Same with famine, you want to shut down during famine. You want to save your resources. You don't want to be you using up all these resources on hormones. So during times of stress, we are wired to stop that GnRH pulse. But we do this to ourselves, like Olympic athletes know this all the time. They over when they overtrain they get hormonal imbalances when we are stressed.

Amy:

Many, many women suffer with infertility in our world, many women suffer with hormone imbalances in our world, and partially it's because of our diet culture, because that's stress on the body. Is partially because of emotional stress and the stress of the way we live right now. So you start that cascade, so that's the beginning of hormonal balance. If you're talking about, "Hey, I want to balance my hormones." Start with that.

Amy:

Start with thinking about, hey, GnRH is really, really sensitive to stress, so I got to remember too that I don't want to signal to my body that it's famine, or that it's war, or that I'm in distress all the time, because then my whole hormonal cascade will shut off. And then that triggers everything. Then it's like a hormonal highway. The GnRH signals to the thalamus, the hypothalamus and the pituitary, the pituitary goes to the thyroid. Then they go to the adrenals, the ovaries and testes, to pancreas.

Amy:

It is a highway and then it gets feedback from those hormonal centers. For example, if the thyroid isn't functioning properly, it'll send signals to the brain like, "Hey, I need help. "I'm congested here. The hormonal highways, there's a car crash." So you'll get symptoms of thyroid issues. But you're also going to get symptoms of other hormonal imbalances when your thyroid is off, because it's a hormonal highway, it all works together.

Amy:

If there's an accident on Exit 15 or whatever in New York or LA, the entire system is slowed down or shut down, that's actually how hormones work. So once you understand that, you'll understand that, yeah, it's not as easy as fixing your adrenals, boosting your thyroid. It's about fixing unclogging that entire highway. It's about fixing that GnRH and all the stuff that's happening in your brain. And it's about fixing it as a system and not singular hormones.

Dave:

Isn't fasting and exercise? Aren't those stressors? I just going to screw up your GnRH cycle?

Amy:

I love that question because it's exactly what we want to tell people. Any kind of hormone stressor like exercise, like intermittent fasting, even like sauna or cold therapy is a hormetic stressor. But guess what? What doesn't kill us makes us stronger in small amounts. So if you are pushed a little bit by your dad to work on your writing, you will get better. But if you are pushed so much that you end up hating it, you might quit altogether, so that's how our body is, we want little hormetic stressors, but we don't want sustained.

Amy:

And very, very heavy sustained hormonal stressors can be bad. Like if you are doing a workout every single day of the week at 5:00 AM and you decided you don't need more than five hours sleep. And you decided, hey, I'm going to do my longest intermittent fast on these days. And you have a little emotional stress at work because your boss doesn't like something that you're working on. And you end up putting too much stress and too sustained stress on your body. You're not going to get the benefits of the fasting, of the exercise any, of those things.

Amy:

So you really have to only pull on a few levers at once. You don't want all the levers to be pulled all at once, otherwise, the body feels sustained stress and your GnRH turns off.

Dave:

This is that fasting trap that I know that you're aware of. It can happen with almost saying that exercise is good for me, I'll just do six hours a day. And there you go, there's someone with no GnRH. And then, "Oh, fasting is so good to me, I'll do it all the time. Oh, starvation is bad for GnRH, but short periods of fasting are good." And that leads to the question. How long is the right length of fast?

Amy:

That depends on you.

Dave:

What?. Not a single answer? Exactly. Thank [crosstalk 00:39:52] you for saying.

Amy:

It's like telling someone like, "How far should I run?" You would never tell someone how far they should run without knowing nothing else about them. Have you ran a marathon before? You may be running a lot longer than someone who's a couch potato who's trying their first run ever. And same exact thing with fasting, if you're a couch potato version of a faster, then starting with 16 hours even will be too long for you.

Amy:

It's not to say that no one can jump into 16 hours, but almost no one can. So start with 12 hours, do 7:00 to 7:00, 7:00 PM to 7:00 AM. If you are a master faster, someone who's Dave Asprey, someone who's been doing it for years, then maybe throwing in a dinner to dinner fast, 24 hour fast here and there is actually not going to be too much of a stretch for you. Like I bet you-

Dave:

It actually feels good.

Amy:

Yeah. Because your body got used to it, it's like anything your metabolism can adapt. It can learn, it can stretch. Going from that metabolic switch, being able to switch from using glucose for fuel, to using fat for fuel and going back and forth is a learned skill that your body can get stronger with. So it's like the

first time you lift weights, you're going to only be able to do five pounds and 10 pounds, but then you're going to be able to lift big weights. And that's how fasting is as well.

Amy:

Just like exercise, not to say that everyone has to run that marathon. Not everyone has to do a three-day fast. It's not necessary. It's not really even beneficial for everyone. So you really want to pick the fasting interval that's right for you. When I'm talking to people who haven't fasted much, I say, "Start with 12 hours. Master that. Then throw in some push fast." In my book, basically what I say is, "Every other day, throw in a push fast."

Amy:

So you might do three days of easy fasting, whatever easy means to you, and three days of push fasting, which is a stretch on your traditional fast. And then you take one day off. And that's how I structure.

Dave:

I like that approach. It's not the same every day. Start with 12 hours. I find most people can go longer than 12 hours if they're using fasting aids like the stuff that I talk about, stuff that you talk about. But over fasting to start it, it's like, "Oh, I'm going to go from... I haven't worked out in 10 years to doing CrossFit every day."

Amy:

Exactly.

Dave:

So you're going to end up filtering your muscle mass through your kidneys.

Amy:

Yes.

Dave:

It's not good. And you might work your way up to CrossFit, but you might want to just be a little bit kind. Fast things the same way, and I think in your book, because you tie in hormones as a part of this, you talk about adrenals, it makes a lot of sense. You learn to fast just like you've learn to go to the gym, you learn to do yoga or meditate or anything else. It's a process. So I like the approach.

Amy:

It's something that it's... I feel like, Dave, it's such big part of every single culture up until about 50 years ago. Cultures around the world use fasting for short and long periods of time. And most cultures, actually every culture in the world before microwaves and refrigerators and 24-hour drive-throughs were doing circadian fasting. And evolutionarily, obviously that makes so much sense. Biologically, that also makes so much sense. You can't be doing everything at once in your body.

Amy:

So your cells also have to pick a time to do things. Your cells say, "You know what? I'm going to do the metabolism stuff during the day. And then at night, I'm going to focus on repair and renewal." And so

when you're not sleeping and when you're eating late into the night, you are shortchanging that repair and renewal. And when you are living with the biological circadian rhythms, you are going to not only feel more energetic, but you going to have better metabolism, going to anti age. You can have better repair and renewal overnight.

Amy:

And so I think for all of us, whether you're doing it for long-term health, or you're doing it just for energy and looking better, either way, this is the way to go.

Dave:

I 100% agree. It does work. It really does. You have some other stuff in the book that's pretty cool. I've written a lot about ashwagandha over the years and apoptogenic herbs, and you talk about that as well. But you talk about another herb from India that I'm familiar with, but I haven't actually ever written about to the best of my memory. And it's called Amla Berry. Can you talk about Amla?

Amy:

Yeah. Amla Berry is one of the most prized Ayurvedic herbs like ashwagandha. Ashwagandha is used in Ayurveda for energy, for focus, for balancing hormones. And Alma Berry is actually used in Ayurvedic so often. In fact, the concoctions I'm in Ayurveda that are for digestion, for gut health, for energy often almost always contain Alma Berry. Triphala one of the most commonly used or known Ayurvedic concoctions or whatever we want to call it, but very, very good for digestion and balancing your doshas. That has Alma Berry.

Amy:

And so I was so shocked to see it that... When I did the research, I found that it's like ashwagandha, so less known adaptogens. Adaptogens, for those of you who don't know are it doesn't add or subtract hormones, it just balances things out. So it adapts to what your body needs at that moment. And that's why adaptogens can be so powerful, because they don't really add hormones, which we know can be really dangerous in our bodies and they're just balancing things out.

Amy:

So I love, I love ashwagandha, I love Alma Berry. I think they're very hormone balancing. I love vitamin D. That's one of the things... I think you did too. I love omega-3s. Those are my go-tos. I'm not a big supplement pusher, meaning that not to say that there aren't amazing supplements out there. I'm such a minimalist when it comes to what I add to my regimen. And so I talked about a few of those things. There are other, besides omegas, vitamin D ashwagandha, Alma Berry, there are a bunch of things that I put in there as things to consider or try.

Amy:

But those are like my go-tos if you had to pick my top supplements that either I use for myself or in my practice.

Dave:

All right. If you're listening to that, that was A-M-L-A. It's not omelet berries. All The Upgrade Creative Collective people are sitting here and checking, "Where did I find omelet berries?" No, Amla.

Amy:

Yeah, Amla, A-M-L-A, Amla Berry. And it's actually really delicious. If you ever go to India or any Southeast Asian country and you get Amla, it's a delicious food and really, really good for your health.

Dave:

You're ready for some questions from The Upgrade Collective?

Amy:

Yeah, let's do it. Let's do it.

Dave:

All right. Let's bring Susan in... Sue, actually. I am not seeing Susan. Where are you? There you are. Hey, Susan? Go ahead and say something.

Suzan:

Thank you very much for sharing your top tips around nature, when what to eat as well as mind, body balance. My question for you is, if you were to write a prescription for each person that comes to see you in order to increase their wellness, what would those that prescription consist of, particularly your top three?

Amy:

I love that. What an intelligent question. Right off the bat, I will tell you the number one is sleep. If you had nothing else, if I could tell you nothing else, like if my hands were tied and I was like, okay, I can only give you one recommendation that will change your health and your life, it's by and far. Number two is nature. Because of the circadian rhythms I talked about, but also because of the way our brains are wired to receive nature and calm ourselves.

Amy:

Number one is sleep, number two is nature. Oh gosh, if I had to just do one more, I think I would do the timing. I think I would do circadian fasting because I think that most of us know how to eat well or that we know what our vices are, but we often are so addicted to foods and are so used to this sugar rollercoaster that we're really going off the rails. Most Americans are eating 16 hours a day. They're just pausing to go to sleep and then waking up and eating again. So my third prescription would be circadian fasting.

Dave:

Beautiful. Thank you for that. It is a really intelligent question. Thanks, Susan. Guys, Susan's in The Upgrade Collective. If you'd like to hang out with people like her, go to ourupgradecollective.com. I may spend a year teaching you all the cool stuff I know. Let's kick on over to the Clubhouse and see if anyone wants to ask a question of a double board certified, soon to be New York times bestselling author. If you guys have a question you'd like to ask her, raise your hand on Clubhouse and I will put you up. Let's bring up Rehan.

Rehan:

Yes. It was mentioned about the gut microbiome. This is a typical question I always ask in a lot of the med tech with my Clubhouse for a lot of doctors and physicians that use testing. I'm curious, I feel like there's not a lot of confidence in one form of testing too since the microbiome is such a unique signature in all of us.

Rehan:

Do you think that the confidence in that testing is going to increase? How is it going to increase? What's your prediction on how it's going to be used in clinical medicine? And how early can we see that? Thank you. This is Rehan.

Amy:

Rehan, what a great question. This is the million dollar, billion dollar question, really, because now that we know so much about the microbiome, we even know that there are happy bacteria, there are schizophrenia bacteria. There are fat bacteria, there are depressed bacteria. There are bacteria that can really change our lives, our disease status. But there's no one validated test yet. And what you're saying is, it's like predicting when or how that will happen.

Amy:

I'm 100% confident that it will happen and it's happening now. We're getting more and more studies. There are many, many... I think there are Oxford Universities running amazing work. Tim Spector is doing amazing work on it. Viome is doing amazing work on understanding the microbiome through AI. I'm 100% confident that we are going to have better accessible and usable testing measures in the coming years. But the problem is, I can't really predict when, or who, or how it will happen, but it's on its way. What do you think, Dave?

Dave:

I think it's on its way. I'm probably most interested in Viome's approach because they're looking not just at which ones are present, but what are they doing? What are they expressing with RNA? And I think that's the future. But at the same time, if you don't know the set of genes in the gut bacteria, what can they express, and then what are they expressing? You have to know both, because then you might want to just kill them all with an antibiotic, which is quite shocking. Dave, talking about antibiotics.

Dave:

Maybe if it's that big of a shit show, maybe you're going to 72-day water fast or something, but that's hard to do and expensive. Maybe you're saying, "Okay, it's worth a reset here or a fecal transplant," because you just don't have it. Or you just need to change what you eat to turn it on and encourage it to grow. I think we're very near to being able to give you good advice on doing that. I like that all the companies you mentioned are good.

Amy:

I love the idea of fecal transplants. It was this therapy that is life-changing for people, yet it was banned in the U.S. And-

Dave:

No, all the good ones are. That's part of the system.

Amy:

Yeah. And it was literally because companies are scared like, wow, this can replace so many medications, probiotics, gut health. That whole industry would be shut off if we could figure out a safe and easy way to do fecal transplants from very, very healthy people, into very, very sick people. Imagine if you were someone suffering from severe illness of the GI tract and you were able to be cured. This is really cool stuff, but... I'm a huge, huge fan of that science and it's unfortunate that it's been blunted, at least at this point.

Dave:

It's a good, a good point. And thank you so much for your question, Rehan. That was a great question. All right, Patrick, I'm going to bring you up now.

Patrick:

Great. Thanks very much, Dave. Just a quick one related back to the fecal transplants. Does it have to come from somebody or can we not somehow grow these bacteria, these cultures and some sort of environment and not actually do a "fecal transplant"? Thanks.

Amy:

Yeah. We have so many entrepreneurs, Dave has an amazing audience of so many entrepreneurs here. That is the real question, is that, can we keep these bacteria alive? That's the hard part. Alive out of their home. And can we mimic the bacteria that we need to replace the bacteria that's already there. So with fecal transplant, what happens is you're giving the soil along with the seedlings. And so, if we could figure out a way to do that without the other stuff, that would be ideal.

Dave:

There is a company that has something like 100 strains that come from poop that put them in a pill that's enteric-coded that seems to work. And of course, their selling is very expensive \$1,000 treatment kind of drug versus the other way of doing it. There is some science that says you can do that, but the idea of getting some of the, I'm going to call it, the scaffolding that they grow on, it very much is like soil. We're like plants, but we carry our soil around with us and plants have external soil and it's a mixture of bacteria and nutrients, and fungus, and all that. We have all that in our guts as well.

Dave:

So when you think about it, okay, if you're just getting the microbes, but you don't have the substrates, like you said, like the soil around the little seedling, I'm not sure it's going to work as well. But at this point, if we can ship negative 200 degree vaccines all over the planet, I'm pretty sure we could ship poop around from healthy people. It's not that hard to do.

Amy:

When fecal transplants were happening in the U.S., it was a really regulated process. They would test them for every known virus and disease, typical HIV, hepatitis, every single communicable disease. And then it was tested for any kind of toxins or anything that would be dangerous for the receiving person. And then they would use a sterile technique of using like a coal, basically the same materials you use for colonoscopy to use for that.

Amy:

And then once the fecal transplant was completed, everything that was used and touch would be discarded, even the materials that were used to scope and all of it. So they had a very, very good technique down. I think it can be even better if you could remove some of the aspect of, for people to think like, oh, I don't want to transfer feces. You could really make it even more, but like you said, Dave, we risk losing the effectiveness when start to take things away like that.

Dave:

Amy, thank you for writing a really good book that's accessible and focusing on that thing that's... It's actually hard to write about energy, but your title nailed it, Why Am I So Effing Tired? Because this isn't a problem. It's a problem for parents, is a problem for everyone right now. And I feel like it's getting worse as stress levels go up. So your approach has pared away a lot of the stuff out there. "Oh, just go exercise more." Like, "No." "Oh, have chips." "No."

Dave:

So I think you've done a good job in creating a framework that people can understand and it is very much correct from all the biological stuff that I understand that I've seen in my work. So I'm very happy to share it with everyone who listens to Upgrade Radio. Thanks, Clubhouse for tuning in and thank you to The Upgrade Collective for being our live studio audience today and asking great questions.

Amy:

Thank you so much, guys. Thank you to Clubhouse, The Upgrade Collective, to Dave, the team. Happy to be here and have a great conversation.

Dave:

Your website, amymdwellness.com. Your book, I'm So Effing Tired.

Amy:

Thanks.

Dave:

All right. You guys can find it on Amazon and I will see you all on the next episode of Bulletproof Radio or the next Upgrade Collective Class, or the next Clubhouse that I do when I feel like it. Bye, everybody.