

Dave Asprey ([00:01](#)):

You are listening to the Human Upgrade with Dave Asprey. Today's a special upgrade spotlight edition of the show recorded at my studios here in Austin, Texas. We're going to talk about what have my favorite things on the entire planet. And no, it's not biohacking. Hold. I'm a fan and it's not butter. It is this molecule here on my arm. And if you're just listening, I'm putting to the caffeine molecule tattooed on my left bicep. Why caffeine? Because Mother Nature provides everything we need, at least if we want to die at an early age. So maybe she doesn't do that. She provides everything you need to at least reproduce, but that includes smart drugs. And there's two all natural plant-based vegan smart drugs. Not that that means they're good for you, but they are. And it's caffeine and nicotine. We're not going to talk about nicotine in this, and if you're offended, no, I'm not saying you should smoke or use tobacco.

([01:02](#)):

I'm just saying that pharmaceutical nicotine reverses Alzheimer's diseases in multiple studies going back to 1986. And it is a well study nootropic, but we'll set that one aside. It's just one of the two major known things that are out there that humans have used for a long time because we love it when our brains work better. By now, you probably can guess what the other one is. Yeah, it's caffeine. Why caffeine? Tell you a little story about caffeine. Back when I started Bulletproof, and for the record, I am no longer affiliated. Anyway, my new coffee company is called Danger Coffee because who knows what you might do, but back when I started this, I was in New York City and my taxi driver was from Ethiopia. And I said, I have this company. We're putting butter and coffee. And he looks at me and he goes, oh, butter and coffee.

([01:53](#)):

My tribe did that in Ethiopia, we call it kill coffee. And thousands of years ago, we would actually grind up roasted coffee beans and we'd grind them up so other tribes didn't know what we were using. And we'd mix it with ghee and we'd eat it before a fight with another tribe. So we would win. And to this day, they are one of the more successful tribes in Ethiopia. And so this is a true story. It was so cool. He went to his house and he said, I brought some Ethiopian butter my grandmother made. I smuggle it back with me. I'm going to give you a little bit. And he brought it to my hotel and gave me a teaspoon of special butter. And this is a testament to how important caffeine is. And if you look at the history in World War I and World War ii, our caffeine supply chain was important.

([02:40](#)):

You look at even the War of Independence in the US or the Civil War, coffee and caffeine supply chains were terribly, terribly important. So I'm just going to argue there might be some magic powers to caffeine. What else do we like around the world? ot, chocolate, all the stuff seems to have caffeine and polyphenols of different flavors. So our upgrade spotlight today is with Chris Fields, who's our Chief Science Officer at Applied Food Sciences. And this is a company that's making novel, high-performance brain ingredients, and they've got a new take on caffeine and how to deal with caffeine, especially if you get a jitter and a crash with it. And I've talked a lot about electrolytes, about other things you can do. So I'm going to go deep with you on the science of caffeine and things you can do to get a smooth experience from it. And like I said, there's lots of ways to just have a stable system and there's lots of ways to use caffeine as a longevity agent, as a mitochondrial agent, as a cognitive enhancer, as an exercise performance booster, and the other science for all those. So Chris, welcome to the show. Thanks,

Chris Fields ([03:56](#)):

Dave. Great to be here.

Dave Asprey ([03:58](#)):

Did you know about those stories from coffee Kill Coffee? You didn't know. I

Chris Fields (04:01):

Did not. Thanks for sharing. That's exciting.

Dave Asprey (04:03):

I wish I remembered the name of the tribe, but it's not my native language. It's one of those things. Does your brain do that? Does your brain, yep. Remember words that aren't in your native language? Absolutely. I wish I did. That would be such a gift.

Chris Fields (04:15):

I think it's the traveling, right?

Dave Asprey (04:17):

Yeah, traveling would be a good one. Actually. I've traveled so much, but every time I still can't say, how do you say French? The ro. Yeah. See the cool. So I mean, you believe in democracy, right?

Chris Fields (04:35):

Absolutely.

Dave Asprey (04:36):

Well, I just didn't count. So there's more Americans eating croissants than there are French people eating. So by the fairness and superiority of democracy, if you believe it's the right way to do it, which is basically mob rule, then the French people need to say it the way the majority say it. That's probably true, right? Yes.

Chris Fields (04:55):

But they never will. So

Dave Asprey (04:57):

You don't like democracy? Well,

Chris Fields (04:59):

I love democracy,

Dave Asprey (05:00):

But then you don't like French people. What was going,

Chris Fields (05:03):

Chris? No, I love French people.

Dave Asprey (05:07):

What a slippery slope. By the way, I had three shots of espresso before the interview, so I'm a little bit out Kidding.

Chris Fields (05:14):

It's the danger of the coffee.

Dave Asprey (05:16):

I'm just messing with you. You make something different called Amati or Amati Max, and you're calling it nootropic caffeine, and it's made from Gua. Can you tell me about Gua?

Chris Fields (05:31):

Sure. Yeah. Okay. So this is pretty exciting because our company Applied Foods, we've spent a lot of time just researching all these plant-based compounds that contain caffeine. And we started in coffee, we merged into tea when we understood the benefits of caffeine like you were mentioning, and the synergistic pairing between that and polyphenols. And we came across this plant when the OSA plant, when we were looking through all the different plant species that have caffeine in them, and actually there's only a few, and one of them is the IEX species Waa. And so we went down to Ecuador and we met with a tribal team. It was the Kichwa tribes, and we were kind of just noticing how they were using this waa and they were telling stories about, and it's an indigenous group down there in Arch, so it's in the Western.

Dave Asprey (06:20):

You said these are the Catchin people from Ecuador? Yep,

Chris Fields (06:23):

Yep. Okay, got it. And it was pretty amazing just to hear their stories and how they integrated it into everyday life, and everyone in their family did it. So every morning they have this usea ceremony and they'd sit around and they'd take the leaves off the tree and they'd put 'em in a pot and they would basically make a herbal tea out of it and infuse it, and then they'd share it with everybody. And that was a way for them to connect with each other as a family, but also to gain energy and help for the day. It's a really, really important medicinal plant for them. And they would actually probably say it's the most important medicinal plant that they have. And so we said, okay, we're onto something here. These people have been using it. It's actually been dated back to the 16th century, but they've been using it forever. And they understand not just its mental acuity and cognitive performance, but that it can actually control and manage that energy in a really nice way.

Dave Asprey (07:19):

It's fascinating to go down to Peru and Ecuador and because certainly there's yerba mate and Gua as a relative of that, right? And then there's also mate de Coca, which is basically teammate out of Coca leaves, which helps with the altitude sickness and performance. And when you go around the world, it turns out there are DMT containing plants on every continent except maybe I think the Arctic, although maybe there are two. And there are caffeinated plants on almost every continent as well. And for some reason, humans have figured out those two things. And if you're new to the show, DMT is a potent psychedelic that your brain forms on birth and death and probably a few other times during breath work, or you can just take it as a drug or in ayahuasca. So we're seeking these transcendent states and we're seeking these high performance states, and those are both inside the biohacking movement. But these performance states, it's like, okay, these guys use chocolate, these guys use Gua. These guys over in Africa are using coffee, but we're all seeking this same basic effect. What's different between yba mate versus the Mt Gua extract that you make or just regular caffeine?

Chris Fields (08:32):

Yeah, that's a great question. So one of the things that we did very early on when we started looking at WA YUSA is we wanted to understand as pharmacokinetics, so is it any different than the way you metabolize caffeine? Is it any different than the way you metabolize coffee caffeine, for example? So we

commissioned a pharmacokinetic study and we noticed that the absorption of was the same independent of the source of caffeine, and that even included synthetic caffeine. So that was really interesting. But the other thing that was done at that research center was we measured neurotransmitter function. And one of the things that we saw in Y YUSA was that it had the ability to shunt the epinephrine effect that caffeine has. So as you know, caffeine is a stimulant. It helps block the adenosine receptor A two A, but in doing that, it does it in the dopamine region of the brain where you actually transmit all these neurotransmitters. One of them, along with norepinephrine, is ultimately epinephrine, which is what gives us the anxiety and the stimulating effects of caffeine itself. And there's these polyphenols in ysa that actually can shunt that activity. So you get the stimulating effects in the brain, but you don't necessarily get the physiological effects.

Dave Asprey ([09:45](#)):

And does the stimulation go from norepinephrine or is it coming from some other thing?

Chris Fields ([09:51](#)):

Yeah, so we don't clearly understand the research behind it, aside from the fact that we can measure things like epinephrine, and we know that it's basically reducing the level of epinephrine.

Dave Asprey ([10:01](#)):

Is it reducing it compared to synthetic caffeine or is it reducing compared to baseline? No.

Chris Fields ([10:06](#)):

Okay. Relative to caffeine itself.

Dave Asprey ([10:08](#)):

Alright, so you're getting a stimulant hit, but it's one that's less reliant on adrenaline, which is epinephrine. Right. Interesting.

Chris Fields ([10:15](#)):

But you see all the other, so the serotonin and the dopamine, so all those other hormones still go up. Right.

Dave Asprey ([10:22](#)):

Interesting. Alright, that it makes a lot of sense. And if you're saying, Dave, you just got really nerdy on us. The way stress in the body works is if you're working properly, you have a four to one ratio of adrenaline, also known as epinephrine to noradrenaline, also known as norepinephrine. And when you get stressed or burned out, the ratio goes heavy on adrenaline and light on noradrenaline. And I knew this because in my mid twenties when I was 300 pounds and burned out and had all sorts of stuff going on, I had a blood test. And there's still unusual, but it was very unusual. Back then. My ratio was 45 to one and it should be four to one. In other words, I was entirely depleted of norepinephrine and my adrenaline was way through the roof. Why? Emotional stress, physiological stress, mold, toxins, adrenal dysfunction, methylation issues, like all this stuff that's now known in biohacking. I just got to have the whole deck of cards all at once.

Chris Fields ([11:22](#)):

And you felt that right? Oh,

Dave Asprey ([11:24](#)):

Good to feel like crap. And so being able to manage either less adrenaline and adrenaline's not bad for you, it actually feels really

Chris Fields ([11:32](#)):

Good.

Dave Asprey ([11:32](#)):

Absolutely not. But to make sure you have enough noradrenaline to balance it out is really important. And there's a variety of supplements that can help with that. But if you're someone who gets just tweaked on regular caffeine from any source, maybe this amity extract because it has a different effect, might be something that you could consider. Now, this is not a green or a black tea either. It's a native of the Holly family.

Chris Fields ([11:56](#)):

Yeah. So also interesting, right? Because it has some of the characteristics. The polyphenol profile is very similar to coffee. So the polyphenols and coffee are the chlorogenic acids and very similar characteristics, but just different isomers of those. So the five and the three are strong in coffee and some of the dye cafe quinic acids are stronger in the waa extract, but it also has these things in there that are from vegetables and fruits, the polyphenols like routines and quercetin and things like that that are naturally found in. So it's kind of a nice, really interesting mix of a lot of different polyphenols from a lot of different species that we're already used to consuming.

Dave Asprey ([12:34](#)):

Now if you read my books, you probably know what polyphenols are, and if you're a normal human and not a nerd, a poly, what of polyphenols are just colored compounds from plants? And the role in the body is really interesting. It's because they are prebiotics, they feed your gut bacteria, but you probably like having a tan, right? Well, we've heard of melanin. Well, what's melanin made out of? It's just cross-linked polyphenols, which means if you get some sunshine or you have the right genetics and you have the presence of polyphenols, as polyphenols change the inflammation by affecting your gut bacteria and then your body can directly use the polyphenols to build a tan, which is really sun protective. In fact, a tan is necessary for you to deal with a light environment that you're supposed to be in. I'm tan because I have enough polyphenols and I have enough sunlight to signal it and I cheat with peptides.

([13:27](#)):

That's a different interview. But if I wasn't taking any polyphenols in my diet, it would be hard to do. So you can say, well, where do you get polyphenols number one source in the American diet? Coffee. Coffee. But that's one, actually, it's several types of polyphenol, but it turns out oregano, rosemary, anything brightly colored has it. And if you have a wide variety of polyphenols, it's actually way better for you than having a wide variety of plants because polyphenols are the beneficial part of the plant without all the toxins like oxalates and histamines and all the other stuff that can be in plants. So the idea of having an extract is I think a really good idea. Tell me more about chlorogenic acid.

Chris Fields ([14:09](#)):

Yeah, so we actually found some of the novelty in chlorogenic acid about 10 years ago when we were starting to research coffee. And we realized that there's very specific activities that chlorogenic acids help with in the body. Not only are there strong antioxidants, as you mentioned because they help with LDL oxidation reduction, they're quite bioavailable, so your body can update them really easily because they

are more water-soluble compounds than you might find in a lot of other antioxidants that are implants. But the other thing that we find is that it actually helps with things like glucose metabolism. So chlorogenic acids have the ability to help with what we call the glucose six phosphatase pathway. So that's our body's ability to regulate how much glucose goes into and out of the bloodstream. And we find even before a lot of this GLP one stuff was becoming famous, we found that it has the ability, although not at the same level, to impact and decrease or decrease glucose insulin activity, but also increased GLP one.

(15:11):

And that was really interesting to us. And along with that, we found that it helps decrease GP one, which just the gastric inhibitory protein. So it has some really neat synergistic effects with how a body regulates and manages glucose. And then we started looking at, okay, well what else is going on with it? And we found that, well, there's a lot of interesting things that happen with cognitive health when you talk about glucose and when you talk about insulin sensitivity. And there was some work that was done on a Japanese group where they really looked at how humans responded to it and their psychomotor speed, their motor speed increased. So basically points of mental acuity significantly increased in some of these studies

Dave Asprey (15:53):

From chlorogenic acid, not caffeine,

Chris Fields (15:56):

From the chlorogenic acid outside of the caffeine. So we said, oh, this is really interesting stuff. And not only that, but some of the biomarkers associated with cognitive health. So if you look at allele lipoprotein, which is basically a protein that's found in HDL, and it helps with our bodies eliminate free cholesterol or discharge it through a breakdown in the liver, but also thyroid, which is helping us transport thyroid hormones in through and out of the pancreatic cells. So it was really interesting stuff that we refining.

Dave Asprey (16:28):

Maybe 15 years ago I started taking chlorogenic acid capsules in addition to my caffeine because there's such strong studies that chlorogenic acid is neuroprotective, and if there's one thing I'm focused on, I want my brain to work. If my knees hurt or something, I'll deal with it, but if my brain stops working, I probably can't afford to fix my knees. So I'm like a brain centric then longevity and then everything else. The good news is if you make any of those better, the other ones follow. So you get to pick your primary thing. I ended up quitting taking it just because 150 pills a day was enough, and I know that I get it in my coffee and that you can get it in your extract as well. And they're slightly different chlorogenic acids that you're going to get when you're using m and t, which is something that I think is worth considering.

(17:16):

And the effect of chlorogenic acid, that list of oh, helps with glucose metabolism. Why do people take metformin for longevity? Well, because they haven't figured out Metformin's probably not a good longevity drug, but because they're trying to inhibit the effect of high levels of glucose in the body, maybe the thing makes your brain work better, whether it's coffee or amity, A source of corgenic acid can have an effect on that, and it does. There are also people who say, oh, if you have caffeine, it's going to raise your cortisol levels and it's going to raise your blood sugar levels. I haven't seen that except in people with extreme burnout or people who just have dysfunctional metabolisms. But for most people, if you're monitoring a CGM, it's not a thing. Do you see any effects of blood sugar going up or down when people use Amity?

Chris Fields (18:04):

Yeah, so that's also a great question because we do know from a lot of historical clinical settings that caffeine can and does impair glucose, and especially those with, it's called the SIP one two a polymorphism genetics, right? Yeah. So it's a genetic polymorphism, but there's also just people who are more just sensitive to caffeine. And I think the literature shows that it can shunt the glucose sensitivity by up to 30%, but because your parent, and this is back to mother Nature, kind of knows what she's doing. When she puts all these polyphenols in with the caffeine, there's a reason for it, right? It's because they have the counter active effect of actually helping with that. And we saw that in some of our clinical research too. So we actually, when we were starting to measure things like cognitive performance as well as just overall anxiety and things like that, we found that, so we did a gaming study or sponsored a gaming study through the University of Memphis, and it was on 49 subjects, 47 of them were males, and two were females.

(19:03):

But ultimately, at the end of the day, what it showed was not only did it have a cognitive benefit because of the caffeine chlorogenic and the polyphenols together, but it also decreased the negative responses associated with caffeine. So there wasn't the jitters, there wasn't the increased heart rate, there was not an increase in blood pressure in the study. So all the things that we thought we knew about caffeine, we kind of backed off on because we said, oh, well, if you actually mix it in the right way, it kind of has a better effect, right?

Dave Asprey (19:34):

It's an argument for taking caffeine with all of its co-factors rather than just a caffeine pill or an energy drink with pharmaceutically extracted caffeine. That makes so much sense. One of the reasons I wanted to have you on for this upgrade spotlight is that you did really good studies on reaction time, working memory and mental processing speed. How much of a difference are we seeing between baseline state and when people are using Amity?

Chris Fields (20:05):

We actually commissioned two studies. One of them was done at the University of Iowa, and we have an innovation center there. So it made a lot of sense for us to partner with that facility. And then we also did another one at the Center for Applied Health Sciences, and both of them were double-blind placebo controlled studies where we looked at Amity and we looked at it relative to just a placebo. And what we were doing was that exact thing we were measuring cognitive performance. So we did a series of tests in both of them. One of them used things like the neurological tests, like the go no go and reaction time and mental accuracy and things like that were measured. And we also did a lot of just subjective validated method measuring too, because not only is it how they're performing, but how they're feeling.

(20:50):

So we did a lot of visual analog scales and we did a lot of subjective happiness scales just to understand, are we seeing this transfer over into how they're feeling with their performance? And all of them showed that there was definitely an increase in mental acuity. So cognition, reduced fatigue, increased vigor, those were all common in all these studies. And the other thing that was really common in all of them was just the perception of how the individual felt. They just felt happier and they felt better about doing what they were doing. So there's all this power in how your mind feels, right? You probably get that more than anybody when you've looked at all these cognitive health benefits of these different ingredients.

Dave Asprey (21:34):

And if you look at it with EEG, I mean, you can tell a brain that's working, right, A brain that's experiencing gratitude and joy and forgiveness and all that versus someone who's tweaking. And you can definitely affect it with chemicals. That's part of how the brain works. Can we talk about Peru and

Ecuador? People know me for, well, just calling kale out for being a garnish rather than a food source for humans because of oxalic acid and just general bad taste and the fact that it's actually not that good for you. And yes, some forms of kale have more oxalate than others, but there's no reason to eat it on purpose. It's like if you're starving, it's better than nothing, but it's more expensive than filet mignon on a per calorie basis, the serious problem. But there's something else that also is worthy of our scorn. Can you guess? It's a food that comes from Peru and Ecuador? Quinoa.

Chris Fields ([22:30](#)):

Oh, quinoa. Yes. Yes.

Dave Asprey ([22:33](#)):

Quinoa is poverty level peasant food for the poorest people in the country. And misinformed radical vegans are saying, oh, it's some special super food. Quinoa is so bad for you that you cannot eat it unless you pressure cook it or ferment it in a certain way. And you go to most vegan restaurants, they don't do that. So you eat it and it just shreds your gut. It gives you extra estrogen. And then why do I feel like crap? And I have a food baby. It's like, because you try to eat a barely food item that's better than starving, that's normally eaten by four and a half foot tall people where it's the only food source they have, and you stole it from them. So this native food is now getting taken and bought up by Westerners when it needs to be present for the people who grow it and actually know how to cook and prepare it. So people, I'll say abuse, Ecuador and Peru and a lot of jungle things. Alberta Veto's been on the show who's a shaman who was sent up from a pharmaceutical companies to go down and find drugs. I didn't find drugs, but I became a shaman. He's on stage at the biohacking conference in Austin for 2025 by the guy biohacking commerce.com. So I have this history exploiting the environment. So I mean, with Amity, what are you doing that stops this from just being another extraction of a native resource?

Chris Fields ([23:55](#)):

Well, Amity and WAA in general is actually part of the chakra. So a lot of the families, as I mentioned at the beginning, really appreciate this plant because of the medicinal value. And so they all grow that in their own family chakras

Dave Asprey ([24:12](#)):

And a chakra. This is not like the chakras in the body. These are small farms,

Chris Fields ([24:15](#)):

Right? Yeah, sorry. Yeah. So small farms and they're family run. And the whole idea is that you grow enough things for your family and for your community, but not more. And the idea is that one, we want to increase the economic value of those communities because they are struggling to survive. They're struggling to figure out how they sustain their own survival. So if we can find ways, and that was one of the really strong initiatives to why we decided we're going to launch Y yusa, is because we wanted to give back to the community and figure out a way for us to not only take away from what they're doing from a fundamental health and wellness standpoint, but also how can we actually increase the viability and the future of the indigenous people in this world. Also, wa youa is not just growing on their chakras, but it's grown in the wild in the Amazon, and it's a plant that continues to keep giving back.

([25:09](#)):

So you can harvest the leaves from this plant two to three times a year without actually seeing any negative side effects associated, and it's actually healthy for the plant to be able to do that. So they typically would go out and they would harvest, and a lot of times they would just take these leaves and let 'em throw on the ground and biodegrade over time just so that they get the new leaves coming in because

new leaves have higher levels of the beneficial compounds in them as they get older. They wither, they oxidize. So we said, okay, there's got to be a way for us to fix this problem. We put a network in place for them to be able to take all those leaves that they don't use, and that's what we harvest in a very sustainable way. We bring trucks, but we also bring these, it's a lot of riverways and a lot of waterways through there.

(25:54):

We bring kayaks through there and we employ people to basically move these leaves to a processing plant where we wither them ourselves and give them the opportunity to become stable so that we can ship 'em to our extraction facility and use them to make an extract out of it. And so this is a win-win win for everybody because one, we win because we're giving back and we feel good about that. But two, they win because now they're getting another source of income into their chakras to be able to grow and other things outside of Y yusa. And then we get the symbiotic relationship where we can figure out, okay, how can we make more value in the community? Whether that's increasing our education, increasing the water quality, all of those things, they're all impactful.

Dave Asprey (26:44):

The fact that you're supporting 90 small regenerative farms makes me really happy because in the coffee business where I've been in it now for about 15 years, one of the things that drives me nuts is you have these people saying, I only drink organic coffee. It costs as much as a small coffee grower makes in a year just to get certified to be organic. So what that means, your organic coffee was grown by a large coffee conglomerate who bought ancestral land and turned it into a factory coffee farm, or you get fair trade certified coffee. That means, oh, it was grown by a small family owned, and they made enough money from this that they were able to sustain the farm and give it to their kids and keep these as small, independent regenerative mixed agriculture things. And so what you're doing with this, and I looked into this before you came on the show just to make sure, is you're actually supporting the ability of small farmers to stay independent with this, which is actually super cool.

(27:42):

A little bit different than the quinoa experience there where they're just kind of taking all of it. And this isn't monoculture, so this is supportive, like you're saying, which is really cool. Alright, and I also want to just make it really clear, guys, Amity is on here because it's an interesting new ingredient, but this isn't someone who's selling you any product. This is an ingredient that you'll find in other products out there. So if you turn the label of something new and interesting over, it'll say Amity on it, which means that it's this specific extract. But unless you are a formulator, I was just joking. I'm like, so I may get a bag of white powder here, and if so, how do I travel with this little white little vials, maybe a razor blade in a mirror just in case. So this is an ingredient, but I thought it was fascinating to be able to go through what's really going on inside the brain, inside the body.

(28:40):

What's the difference between caffeine from Monster Energy or something, not a good idea, or even from no doses and these people with caffeine sprays or whatever, versus caffeine plus chlorogenic acids and the fact that there's different chlorogenic acids in tea and in coffee and in Gua, and that you've identified a unique signature that you can get. It's a cool story about it. And finally, you did the research. You said, okay, what does it do to reaction time and processing speed? And then the gamer study you did that we talked about earlier with MT max gaming, performance, reaction, time focus, mental stamina, and I got to ask you this, have you ever looked at this with poker players? No, we haven't. But maybe I should start. I've had a chance to work with two of the World Series of poker winners. I have people who have come through 40 years of Zen, my neuroscience company or just I've coached directly, and one of them in the very early days of Bulletproof is Dave, my brain is so different, I can grind my competitors down.

(29:45):

I said, what do you mean? He said, well, normally three in the morning everyone gets tired and we agreed to stop. If it's unanimous, he's like, I'm good all night. So he just keeps playing when everyone else is groggy and he is winning and winning. I love it. And you can get us sustained advantage and a little bit more attention to see that one guy's tell or something. So I always feel like there's a reaction time, first person shooters, and then there's other games of chance or games of skill like poker where it's really about your consciousness. Are you aware of everything in the room around you? Are you aware of all the small things that our bodies normally are trained to ignore? Can you bring in all this high bandwidth information, then set aside your emotional response value your intuition and your thinking, and then make a decision? That's a really complex skill, and it's the thing that leads itself to new nootropics. So I think most of those players are on modafinil. One of my favorite nootropics, and this is probably this AMT Max is probably a really good substance for gaming. Not just digital gaming, but also for poker.

Chris Fields ([30:51](#)):

And not only that, I mean just because it has great ability to attenuate or aid in the motor skills and psychomotor skills. So you can really see the connection between the brain activity and the physical output that's happening. So for athletes and

Dave Asprey ([31:08](#)):

For athletes, take it. Sure. Nice. Okay.

Chris Fields ([31:12](#)):

Yeah, and actually we have quite a few that just anecdotally will give us their feedback on it. And it's great because it does give them the ability to just think more clearly. So when you're in some of those agility and performance-based physical fitness activities, it really does make a big difference.

Dave Asprey ([31:29](#)):

Well, I'm thinking in particular of Nick Foles because as we're recording this, just yesterday, he announced his retirement and he was on the full stack of supplements that I made when he was MVP in the Super Bowl and was kind enough to write about in his book, and we got to be friends. And I'm thinking, how many football players ought to be on AMT max because it's given them the psychomotor benefits. And that is a tough business. You just have to have your brain on all the time.

Chris Fields ([31:54](#)):

All the time. Yeah,

Dave Asprey ([31:55](#)):

All the time. What about teenagers?

Chris Fields ([32:00](#)):

So part of what we did in one of our clinical studies was we looked at the safety aspect because there is a lot of concern over young adults and caffeine intake. And actually there's caffeine steering committees that look specifically at that and how the intake levels might've changed over the last decade. And a new study's actually going to be published this year because the last study that was done was like six years ago. So everybody's kind of thinking, oh, is there a significant change? And young adults in their caffeine consumption? So the jury's still out on that, but it will be out soon. But ultimately, really what it comes down to is it's safe. In the study that we did on cognitive health, we were looking specifically at, okay, does it change or impact things like heart rate and does it change or impact things like your circadian

rhythm? So that was where the big concern was with some of the energy drinks that were out there. So part of what we did in this evaluation was there's this QT measurement, a QT sub C, and so it's Q wave relative to

Dave Asprey ([33:03](#)):

T-wave. So guys, these are markers of cardiac function when you look at an eek G, just to translate that wave,

Chris Fields ([33:09](#)):

Right? And so that differential is what you look at to see if you have a cardiac arrhythmia. And there was, even though some of the prior literature said that energy drinks basically provoke this,

Dave Asprey ([33:20](#)):

Some of them can, yeah,

Chris Fields ([33:21](#)):

We said, okay, well let's study this and make sure. And what we found was when we've taken an amt, you don't actually have any significant change in those. Even though it has the caffeine in there, you don't see that net change or that net negative change in the QT ratio. So that's a good thing, right? And not only that, you don't see an increase in heart rate. Wow. So there's all these other things that say to yourself, okay, there's probably the right way to do this right, and the right way to formulate.

Dave Asprey ([33:51](#)):

Okay, that's interesting. Is there a difference for men and women in how AMT max works?

Chris Fields ([33:58](#)):

Yes. So clinical evidence shows that women are just significantly more sensitive to caffeine than men are. And maybe it has to do with, and I'm not sure we even understand, maybe it has to do with the fact that men generally consume more caffeine than women.

Dave Asprey ([34:13](#)):

You're saying women aren't just little men,

Chris Fields ([34:18](#)):

But it probably

Dave Asprey ([34:18](#)):

Physiologically there's so many

Chris Fields ([34:20](#)):

Differences, but it probably has more to do just with the chemistry, right?

Dave Asprey ([34:23](#)):

It totally does, right?

Chris Fields ([34:24](#)):

Yeah. So we definitely see that in every study that we've ever done that women are definitely more sensitive to caffeine intake.

Dave Asprey ([34:33](#)):

Are they more sensitive to AMT max?

Chris Fields ([34:34](#)):

So not necessarily more sensitive to AMT max, but they definitely see a response in things like how they're feeling. So we're not seeing it in biomarkers and in testing. So we're not seeing it in blood pressure changes, but what we are seeing between men and women, for example. But what we are seeing are changes in just their perception of how they feel.

Dave Asprey ([34:57](#)):

So they might need a smaller dose, but they're going to feel really good.

Chris Fields ([35:00](#)):

Absolutely. Okay.

Dave Asprey ([35:01](#)):

What about during perimenopause? I've had so many friends who are, say, my brain worked really well, and then I started going through perimenopause and what is going on here? Is MT max something you've either tested or do you have anecdotal evidence? Is this good for bringing your energy back?

Chris Fields ([35:17](#)):

So there is this subset of population of clinical trials, and specifically in performance and sports nutrition around the deficit and just looking at women. So when we did our University of Iowa study, we really focused on the females in that study just because we wanted to see, okay, is there a significant in performance parameters associated with intake? And also during that change in life. And we are seeing just as a general population, the onset of perimenopause is happening in a lot sooner, right? Than it used to be even 20 years ago. So essentially what that means is you're just more sensitive to fatigue and you're more sensitive to demands in your energy, whatever that means on an individual basis. And during this study, we actually saw a nice increase in energy and a much significant decrease in fatigue associated with the AMT max intake. So that was great, and it did transfer into a trend analysis for performance as well. So when we did our Sarco motor and all of those analysis related to, Hey, are they just performing better?

Dave Asprey ([36:26](#)):

Okay, now if you're saying, all right, I want to give this a try, there's a list of companies who use this and their things. It's at [appliedfoods.com/where to buy](https://appliedfoods.com/where-to-buy). So you can go there and you can also just Google for amate, A-M-A-T-E-A max is the name of this ingredient. And it's different than just drinking Gua because this is a specific extract of the chlorogenic acids and the caffeine basically. Exactly. So that's going to have a different effect than just drinking a couple of GU teas, right?

Chris Fields ([36:58](#)):

Sure. It'll be at a much different concentration of actives, right?

Dave Asprey ([37:02](#)):

And it's cool because you guys just applied foods in general that you're making a bunch of different compounds that formulators can use. And so if you're listening to the show for the first time, or you're new to this whole biohacking world, there are a bunch of manufacturers of just bulk material stuff that everyone makes, like vitamin C and all that. And then there's specialty ingredient companies who make new products that didn't exist, and they go out and they do this whole process of talking to tribes people and finding something that's active and then finding out what it is and where it is and why it works and does it work, and who should use it, why? And it's different than what big pharma companies do. Very, very different. And when these companies do this kind of research, sometimes it could take five or 10 years, but how long did it take to come out with all this research?

Chris Fields ([37:53](#)):

Actually, it took about 12 years. Oh,

Dave Asprey ([37:55](#)):

Years. There you go. So it's on par with drug discovery. But these are not drugs, thank God. Because if it was a drug, just add two zeros into the risk. Exactly. Another a hundred million to what it would cost. So what you want to know, what you understand is that sometimes there are these new ingredients, and you'll rarely hear from the makers of those ingredients. These are kind of science nerds. 12 years in the trenches. It's my job on this show to bring new leaders in biohacking out so you can hear about them. And then research you may never have heard of, you probably know Andrew Huberman. He was on the show before. He had a podcast and Peter Atia before you had a podcast. They come on the show. And then I work to find these interesting new compounds that you might say, you know what?

([38:42](#)):

I am getting too much of a jitter from this, or I'm looking for a different cognitive answer. I just want you to know the potential tools that are available to you and why and how they work. You don't have to be an expert, but just enough to say, this is worth my consideration. Then you find something that has it and you try it. Just say, great life changed. Awesome. You feel good at the end of the day, awesome. And if you try it and say, it didn't work, awesome. That means do something else. And all I care about is do you feel really good energy all day long, which makes you kinder to yourself and others? And are you going to live as long as you want to with the quality of life you want? And for me, it's at least 180 years, maybe longer.

([39:22](#)):

I just want to look and feel better than I do now the entire time. That's the goal. Will I make it? I don't know, probably. Do I want to live the rest of my life in a wheelchair with tubes in all sorts of places? No, nobody does. And that's not natural. That's actually not inevitable. In fact, it's never happened in all of human history except in the last 30 or 40 years. So that's not the world I live in. And if you listen to this show, welcome to My World where that is not how it works, because you have the tools and it's very cheap and simple to do it now versus it's very expensive to do it when you're 80 and you decide, oh, I want to undo 70 years of hard living. You can do that. It's just crazy expensive. So that's why this show exists, and that's why this episode exists, because now you know about Amity Max, and it's one of those performance answers you might want to use because it's safe, it's gentle, it's legal, and there you go. That's what it's all about. Chris Fields from Applied Foods, thanks again for coming on the Human Upgrade. Thanks

Chris Fields ([40:25](#)):

Dave. Great being here.

Dave Asprey ([40:27](#)):

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If you liked today's episode, do you know what to do? Tell someone about it or go out there and try some AMT Max. Or if you like the episode, leave a review. I always appreciate that. And if you want to support any of my different businesses, go to upgrade health.com and check out your lab tests. Heck, try some Amity before and after and do another lab test and see if it made a difference. Bottom line is you get to own your own biology. No, your daddy's not in charge of your biology. Your government daddy is not in charge of it. Your white lab coat, daddy's not in charge of it. Only you, so be your own daddy. There you go. You are listening to the Human Upgrade with Dave Asprey.