Using your Genetic Code To Hack Your Energy Transcript

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Introduction and guest background

Welcome back, everybody, to the bioenergetics summit. I am your host, Doctor Greg Eckel. I have Kashif Khan, the CEO and founder of the DNA company, where he personalized medicine is being pioneered through unique insights into the human genome.

He is also the host of the Unpeeled Podcast. As he dove into this field of functional genomics, he revealed that his neural wiring was was actually genetically designed to be an entrepreneur.

However, his genes also revealed a particular sensitivity to pollutants. So now seeing his health from a new lens can go further and started to see the genetic pathways that led to his own family's challenges, the opportunities to reverse chronic disease.

His measure of success is not in dollars, but in lives improved. Welcome aboard. It's a pleasure. Good to be here with you. Indeed. Our topic today is using your genetic code to hack your energy.

And I want to talk about because this is a new, new concept for a lot of folks. And you're really out pioneering, in the research. So you give us a, the latest rundown on genetic research where we're at.

Yeah. So genetics used to be, well, in fact, I guess it still is. There's just a new layer that we do talk about, but it's still is is what is each gene mean?

Meaning you get a report back, you've sent in a sample, you did a test, and then you'll be told you have this version of this gene, this version of this gene, in this version of this gene.

From there, somehow that gets interpreted either with a guide or a counselor or a doctor or some software, like you buy a test online and you log in and you see something.

So the challenge has been there, that the depth of interpretation has been limited by focusing on what each gene means when the body is a lot more complex in that, yeah, there's pathways and systems and things work together.

It's more poly genetic as opposed to like individual.

From gene reports to functional genomics

Right. Yeah. And so that functional approach, that's what's new. And what's really cool about that is we've moved far away from just the rare genetic conditions and looking at things like traits, like what colors your eye and your hair too much more complex things like chronic disease and aging at a very certain level, you know, things like energy, there's no energy gene. Right? And you know what?

Five years ago we said, sorry, this is not genetics. This is something else. But now we can see a very clear path to how whatever work you're doing in terms of your bioenergetics, your energy here is at a whole other layer work you could do to optimize that, because there's everything's connected, right?

It's very functional in nature. And that's what we've learned. I love that, you know, the component I always put a slight asterisk around when talking with patients around the topic.

I love running, genetic assays, but I agree with that component. It's a concert. It's a symphony. It's not just one gene independent of the others. And so using that, like, are you seeing, are there specific research projects that are coming out looking at the pathways and how the pathways interact?

Yeah, that's what your company is doing. So we did do that. What we did, we did three things. First of all, we said there's enough information there about DNA.

Many billions of dollars have been spent researching the human genome. We know what the genes mean. What we don't know is how they get to actual insights in that concert that you're talking about how they work in system.

So that's the first thing we did. We looked at human biochemistry. Human biology said, here's a system that we already understand cardiovascular hormones, neurochemicals of the brain.

How do we now match and mirror DNA to instruct each step in that process, as opposed to this streaming? Just assuming just here's a baton pass. You know, these genes are working together in a system to get to an end result.

So that was one second was we either then answer the question, well, if we now understand the genes and the systems better, why are we still not getting 100% result?

You know, even if we identify this person has a worse hormone profile for some problem, they still didn't get it. Well, then there's the happy genetics.

There's the choices of environment, nutrition and lifestyle. And so we had to figure out now that we've identified all these profiles, all these buckets that people fit in for different profiles, what are the loads that are either beneficial or problematic for that profile.

And it's not the same for everybody. So now the environment, nutrition and lifestyle choices can, with great uncertainty, point to a problem. This plus this takes you from 80% chance of Alzheimer's to you have Alzheimer's or 20% chance of not getting Alzheimer's.

Do you do have Alzheimer's? Because I say we're saying the same thing just the other way around. That was step two. Step three was we needed to come out of the lab, which is where our genetics is, you know, studied and microscopes and petri dishes and whatever you see on TV to like, how do you actually clinically apply this stuff.

So we did what typically isn't done in research genetically is we actually studied patients, we open a clinic, and we spent three years studying 7000 people.

So one by one, by one by one, we took it from this highly complex, you know, 22,000 genes each is 20,000 letters long. So there's billions of letters of code to what's this person?

What's this person? End of one. Yeah, right. Truly personalized. That's what got us to like. Now with certainty. If I have your DNA in my hand, I can tell you this story about yourself that is so precise and resonates so well.

I can tell you your personality. I can tell you do procrastinate. Are you irritable? Should you be an accountant? Should you be an entrepreneur? We've got it at that level of certainty because of taking this research and then combining that with studying 7000 people to understand how it applies in the real world.

That's how you truly unlock the value. What's inside this sort of human instruction manual, and why we can have conversations about things like energy that aren't even genetic, genetically linked, I love that.

So let's let's dive in there. That's a great segue. Thank you. What so what do our genes inform us about our energy levels. So there's direct genetic inferences we can make.

How genes shape energy and detox

For example what is energy? First of all is are we measuring like literally electricity. What are we measuring. So it's you know, ultimately it's way you feel.

How are you coping with whatever you need to do? What's your energy level when you ask somebody. So there's a

couple things going on there. Your actual mitochondria, which I'm sure you're talking about a lot in this summit.

Right. That's where you produce it. So the ATP, the stores of energy, the reaction of the cells in your body are taking in oxygen and nutrition to create energy.

That's what's happening all day long. In that process they create oxidants. Oxygen converts to oxygen. The thing that gives you life is slowly aging you as well.

It's a free radical. It's a toxin. So that's one thing you can look at. There's a gene called two which determines this process. How well do you actually deal with oxidation as an outcome of creating energy?

Because you might do a good job. You're quite efficiently create energy, but you're so bad at dealing with the oxidant byproduct that it's sort of suffocating your cells, creating a bit of brain fog, inflammation, overall fog in the body because the cells just aren't firing at their optimum.

So that's one thing you can look at. You can then look at, well, maybe I do that really well and efficiently. I don't suffocate and choke myself as I clear this oxygen.

Well where do you clear. Do you put it into the blood. So now if you don't have the right phase two detox glutathione and that pathway that draws things out of the blood sends it to the liver to get rid of it.

Like, if you drink alcohol, you know what you what you do. Your liver helps you get rid of it. But there's something that brings it to delivery in the first place.

There's genes in that pathway that you can have what's called a copy number variation, meaning you don't even have the gene. Forget about what snip or what variant or what version you literally are missing a page from your human instruction manual.

And in such a important biological process, this happens here, unfortunately. Why? Because our ancestors didn't need it. The reality of the way they lived and the food, the aid in the air that they breathe it.

Toxins weren't the load that they are today. Yeah. So we didn't inherit that from a lot of our ancestors. A piece of code that's missing. So that toxin pathway that metabolizes of oxygen, that's one big one.

Then you look at things like hormones, right. The hormone pathway is very precise. So this gray area of PMS, menopause, infertility, my hair's falling out, you know, gynecomastia on men and man boobs literally.

And why are my hormones doing all these weird things that are treated as gray area? It's actually very black and white. With your DNA you can understand the hormone cascade and forth.

So progesterone converts to testosterone, converts to estrogen. Right. Why is it some people go to the gym and they get super strong and big and bulky, but they can't see the fibers in their muscles?

Why is it some people can see every little striated line but they can't get big? Why is it some people can lift heavy, but they have no endurance and vice versa and vice versa. And there's all these different profiles.

Your hormones direct what you what the outcome of your body like. What do you look like? What do you capable of. So if you're misaligned in your choices to what you're meant to be doing or what you're designed for, you're going to feel like you have low energy because you're using tool A for job B, it's really that simple.

So you can get a specific prescription out for exercise, diet, all of these items very specific. And we'll talk about diet. That's another big one in terms of hormones, very specific in terms of general.

Here's what you are. But for women it gets even more specific because the hormone cycle happens for men every day. For women, we know it's a month long cycle.

So that same menstrual cycle that women go through, men go through like a menstrual cycle, like it happens every day, right. So now in that menstrual cycle for women, every week is different.

Yeah, that's circadian rhythm. That flow week one you're strong. You can lift push big heavy things and go ahead and put on muscle week to try and lift that heavy thing.

And you're going to get an injury because your estrogens are high and things are inflamed and your ligaments can't handle as much. And then the week three, you need to be more recovery, more like yoga and low, low intensity work.

So that circadian flow again that week, what were you wired to do and what did you actually do is going to lead to I feel like I have energy or I don't have energy because you're not doing what you were wired to do.

That backing up into the energy discussion research, you talk about the energy starting at the mind. Can you explain that a little bit more? I would say that's one of the biggest things that we sort of unpacked is the neurochemicals of the brain.

Because, you know, remember we met 7000 people. So in these clinical reviews we were able to document their behaviors and the neurochemicals of the brain.

We already understand kind of what they do. We didn't yet understand what genes instruct the three phases of a mood issue, which is the anticipation, you know, when it comes to, for example, pleasure.

Brain chemistry, mood, and epigenetics

I'm about to eat something. There's the anticipation, I smell it, I know what's coming. It's starting. Then there's the actual instance of I bite into it and that peak pleasure, that's the actual binding.

You feel it. Then there's a clearance you need to get back to normal. So there's some enzyme or protein that gets rid of it. So you can do these three things at any different levels of intensity.

So take me for example my dopamine pathway. There's one that we just talked about for pleasure which also powers reward by the way. So pleasure is you know, enjoyment. Reward is achievement.

I have, the lowest density of dopamine receptors. There's a gene called D2, and I have a specific version of it that means I have very sparse density.

So I experience pleasure in a reward way down here. It's hard for me to experience the gene, which then metabolizes the dopamine and breaks it down. I have the fastest meal, then Comt, which is the gene that clears it all, like the broom that gets rid of them.

I have the fastest com, so I'm feeling it way down here and it's gone like that. So for me pleasure and reward are both very difficult right now. When it comes to my outcome.

That could mean depression because I just didn't get any pleasure. That could mean, achievement. Because I go down the reward route, I start taking crazy risks and doing stupid things and becoming an entrepreneur like I am.

Or I mean addiction because I go on the pleasure route. So now that's one neurochemical. There's multiple neurochemicals that make up your brain. So there's your ability to deal with trauma and pain.

There's your, response to stimulus and how how sensitive you are to the stimulus. There's how much meaning you give things and the weight you give things.

All of that stuff can be highly supportive or burdensome on how you perceive the world. And there's some people that their energy level meaning remember what is energy?

How do I feel? Meaning how is the person perceiving energy? It's how they feel. So how they feel may not be entirely accurate because of how they think they feel, right?

A person that has the opposite of me the maximum dopamine binding. He's just so used to feeling pleasure out of everything around them. It's just so easy when you give them something like a Covid lockdown, for example, and you take the pleasure away, they have this acute anxiety response smash, crash.

Yeah, because they're just not used to being down here. They're used to being up here. Energy drain right. They haven't physically lost energy, but their brain isn't allowing them to function at that high energy level.

They're crashing that their mood issue is overpowering and superseding their actual energy level. So you get what I'm saying. There's and then there's certain people for whom, for example, their serotonin levels are off.

And so their brain has difficulty prioritizing stimulus. And so like, hey, please stop chewing your food like that. Oh, that clock is ticking too loud. Oh, stop ticking your pan.

I can't focus, right. So the every little stimulus gets to them, it's great and work because they're highly detailed oriented and they can cross every dot, every eye.

But amongst their peers it can be problematic. Like, oh, be careful how you talk to that person. That in itself is a burden, right? They they experience burnout from the exact same context that you tell somebody else, it's okay, go do this.

It's normal human work for them. It causes burnout because they're overstimulated by the environment, so they need something else. So all we're saying is that if you understand your genetic map of the brain, you understand to what degree you're experiencing these chemicals which means you now understand how you're perceiving the world.

And if you start there, it's a lot easier, like all the great tools and tricks that you guys have to get the best outcome from that. So now so that leads into just because you have that snip or gene array doesn't mean that it's firing.

Right. So how important are epigenetics versus genetics. So yeah and there's two layers to that. The thing you just said which is how much does that gene express versus and we're going to talk about there's two different ways to look at epigenetics.

The conventional way is what you eat, what you breathe. How you exercise can change the degree to which a gene is expressing. I have the bad version of a certain gene, but if I exercise for an hour a day, it makes that gene work harder.

So there's certain things you could do to turn the dials. So that's epigenetics at the science level. At the functional, practical level, I just talked about myself and my dopamine pathway.

Why am I not an addict and why am I not depressed? Because clinically that's what I'm designed for because of my context. So when it comes to everything about mood and behavior and everything about the brain, the con text you're in has to be considered on top of your genetic map to get to an outcome.

What do I mean? I know it's hard for me to experience pleasure reward now, my context was my father passed away when I was in my late teens, and I had to take care of my mother, my sister.

So I started working and I started working really hard. And that sense of reward that I got, that I kept chasing and chasing and chasing made me highly entrepreneurial because I needed tools.

I had to pay the bills. It could have been. I grew up in a very wealthy family where my father lived, although he was 100 and there was no need to do anything, and I probably would have gone down the depression route because I wasn't getting that stimulus and I wasn't getting that dopamine hit, or I could have gone down the addiction route

because I would have found something that gave me pleasure because I don't need reward, I already have. I'm taken care of.

So I may have gone down the addiction route and found something that. And this is why you see these stories are quite there. They resonate based on the context, the the highly successful person that's also suicidal, right?

The professional athlete that's depressed people that achieve high also have these mood and behavior crashes because the same neurochemicals power both the context you're in creates the outcome.

So that's your brain. Everything else cardiovascular hormones. Sleep is about environment, nutrition and lifestyle, which is the same thing as same context.

It's just a little nuanced meaning these are the actual buckets. You can have the worst hormone profile. You can have the worst cardiovascular profile.

I can predict the quality of your endothelial linings or your your arteries or on your heart, the inner lining that actually the blood touches and flows through.

What quality lining do you have? Is it stainless steel or is it paper thin, which means highly prone to inflammation? Now you could have the worst quality and you could have the best energy in the best health. Why? Because you're doing everything right.

You're living on a beach, eating, breeding, eating fish out of the sea. Perfect sunshine, vitamin D, sleeping well, no stress. You're doing everything right.

Or you could have a medium not so bad version and live in New York as an investment banker and drink for your drink for lunch every day and not sleep enough, etc., etc., etc..

So here's the profile. Here's your risk. If you do everything right, your energy levels are going to be great and you're not going to be sick if you do everything wrong, even though you have the best profile, you're not going to have energy and you're going to be sick.

So that epigenetic, that context, when it comes to the brain, it's literally context. Where are you? And when it comes to everything else, it's environment, nutrition, lifestyle, these three things you have to triangulate around your genome to equal the net result.

And I think that's a much more practical way to look at epigenetics versus trying to measure a genetic expression, which how do you even measure that?

You know, it's so complicated. And here's what you're wired for. Here's what you're doing. It's no wonder you're sick I love it, you know, and that's a great you.

You explained that very well on the epigenetics.

Six key health buckets for optimization

What are you surrounded with? What are they getting bathed in. And then how are they expressing. Love it. So what are some key things people can do to hack their DNA and have more energy?

Yeah. So step one is understanding your profile. So what bucket do you fit in the second one six big ones we look at are cardiovascular. So everything about diabetes hypertension cholesterol everything about your vasculature Alzheimer's dementia all that stuff.

Right. That's a big one. Diet nutrition. Should I be on a keto diet? Should I be a vegan? How well do I metabolize carbs? Are carbs actually a problem for me?

Maybe they're not, insulin response. Then we look at mood and behavior, which we talked about. How is your brain wired? How do you perceive the world?

And therefore what changes do you need to make and how you deal with people and your context? Sleep. You know, the genetics of I can't fall asleep, I can't stay asleep.

I sleep through the night, but I wake up feeling not rested. All three of those can dramatically affect your energy. The next day, then hormones. Everything about my innate body type.

And what am I doing with hormone production? Clearance, metabolize ation, all that stuff. And how that equals hair, skin energy, vitality, youthfulness, all that stuff.

And the big one, for this context, is cellular health, immunity and detox. How healthy are your cells? We all agree that disease is rooted in inflammation.

What is inflammation rooted in? It's rooted in your your cells being, like you said, bathe in the wrong stuff. Toxins free radicals, you know, stress, cortisol, all that stuff.

So what are you putting your cells through that may cause them to age prematurely or be suffocating in the wrong stuff? So now between those six, if you kind of go through those, you become the optimal version of yourself.

All of a sudden, that max energy, that max vitality you know, nine years old, running with your grandchildren instead of sitting on a chair looking at them?

That's a choice. Instead of hearing the story, actually riding the bike with them and being with them like, present in the moment. Yeah, yeah, that's a that's all a choice.

And so it's these six areas that we focus on because we believe once you've optimize yourself in each bucket, you should be able to reach that 100, 810, 120 quality years.

It's not just years to your life. It's life to your years, like truly vitality. And and with that energy, that energy drag comes from doing everything misaligned to your genomics.

So for the most part, we know what to do. There's going to be a lot of great people speaking here that are going to tell you great things. All we're saying is you can take the trial and error out.

You can take the one size fits all out. You can open an instruction manual and know exactly what you need to do, where you need to focus. 20 different things are people are going to tell you 20 great things.

Which one do you actually need? Right? If you can focus in first? No. Read my instruction manual. Oh, this is the broken part. I need to fix this. That's what you're doing is trying to tell you I love it. Yeah.

The way that I will talk to folks around that is that you get to go right to the front of the line, the head of the class. We take the guesswork out because we know your platform of what you're operating on.

So we go right up there to the beginning on the highest, you know, leveraged motion and movement. So, I really thank you and appreciate your information and the way that you described this.

So, so very sometimes you get into these conversations around genetics and epigenetics and it gets very convoluted very quickly. This is very, understandable, digestible and usable.

Quite frankly. I mean, that's I think that brilliant. You've shown you've done your homework and, you know, you're helping, thousands of people around the globe now with this.

So thank you know, it's a pleasure. We love doing it. And I mean, if for us it doesn't feel like work, it feels like when

you're changing the world and you're helping and save lives, it just, you know, and that's why I mean, I don't stop working until I sleep at night.

And even then, obviously I'm working in my sleep, asking questions to be answered in the morning. It's. Yeah. Well, thank you for coming on to the bioenergetics summit.

Any last parting words? Any inspiring session that you'd like to leave people with? Well, I, I truly believe that disease and aging are a choice. I've seen it in myself.

And let me give it up myself as an example, when I started on this journey, I was sick.

Personal health turnaround and closing

Like, really sick. I was 30, I'm 42 years old now. I was 38. And when I was 38, I had eczema to the point where I couldn't open my left eye. It was sealed shut.

I had psoriasis to the point where if I would clasp my hand in a fist, it would bleed, my knuckles would bleed. So I would have to keep my hands open. Like this.

I had migraines where my business partner would have to drive me home and I'd be vomiting out the car for the pain. Gut issues, depression. It all hit me all at once.

And the question I kept asking the doctors five different doctors for five different problems. Why? Why is this happening? What did I do? Because it doesn't make sense. I for 38 years, I didn't have any of these things and they all just happened.

What did they know? What did I eat? What did I breathe? And like no, no, no, no, it's their answer was like, what do you have and what pill do you have to take?

Right. And I started to believe that. And but it didn't it still it didn't make sense. It didn't make sense. So I kept pushing, kept pushing. And that's when I discovered my own genome.

And I found that there were pieces broken and pages missing. And no wonder that my office being on top of a manufacturing facility where they were pumping pollutants into the airways that I was breathing every day, was causing such an inflammatory load in me that I eventually started to express all these problems.

My business partner, by the way, the same genes that I was missing. He had an extra copy, so he was like a superhuman detox and he had no problem. And what you're capable of is so important versus the terrain you're in.

And so this is where I learned myself at that time, I did a biological age test to figure out how old I was on the inside when I started to learn that you can take charge of your health.

And I was 43. So at the age of 38, inside I was 43. I'm now 42. You know, we've been building this for some time. My biological age is now 33. Nice. That feels really good. Yeah.

And it feels good because everybody can do this. You're not born with Alzheimer's. You're not born with breast cancer. You're not born with cholesterol.

You're not born with a Lipitor prescription. These things all happen sort of 50 plus. It happened to me a little earlier because I was breathing in toxic gas every day.

But it happens like 50 plus because that's how resilient your body is. It will fight. But at that age, your mitochondria dips, your hormones dip, you can't fight anymore and you start to get sick. Right?

So one thing I should add to we've spoken a number of these summits and people always ask, is there any kind of

promo or anything that I know? I don't know if we created one, but we'll make sure to, it's Bioenergetics Summit, right? Yes.

So we'll put a BS promo code, give everybody a discount. Thank you for spending your time here. Right. So it's our way of saying thank you. So if you just if you go to the website, use the promo code BS, I'll make sure that it's live right after this.

I'll go set it up. Perfect. You'll get and we'll also share that. We'll share that with folks around the interview and, make sure that everybody knows how to how to interface that way.

That's how we'll make sure, you know, because I know everybody always ask that question. So we'll get that set up for you. But when you go through it yourself, you'll experience the choices are easy, like, right, we're going to get you to that Max.

So that's my long drawn out closing statement I love it. Thank you so much, and thanks for coming on to the bio energetic summit.