Introduction and Kashif's background

Welcome to this episode of the Reverse Alzheimer's Summit. I'm here today with Kashif Khan. He's the chief executive officer and founder of the DNA company, where personalized medicine is being pioneered through unique insights into the human genome.

Growing up in Vancouver, Canada, as an immigrant in an immigrant household, Kashif developed an industrious, entrepreneurial spirit from a young age. Prior to his tenure at the DNA company, Kashif advised a number of high growth startups in a variety of industries.

As Kashif dove into the fields of functional genomics as the CEO of the DNA company, it was revealed that his neural wiring is actually genetically designed to be entrepreneurial.

However, his genes also revealed a particular sensitivity to pollutants. You can see why I have him here to discuss this on the reverse Alzheimer's Summit.

Now, seeing his health from this new lens, Kashif has to dive in even further and started to see the genetic pathways that led to his own family's challenges and the opportunities to reverse chronic disease like dementia.

His measure of success is not in dollars earned, but in the lives improved because she welcome. Oh, it's a pleasure. Good to be here. So I'm really curious, about how how you got started.

I mean, you you have this incredible story of being entrepreneurial, and then you ended up in health care and in genetics. How did you get there? Yeah. So it's funny.

So growing up, health was always something that was important in our family because everyone was sick. Right? So it was a thing that was kind of in the forefront.

But my, my father, who passed away when I was 17, he, like, you know, he would take me to sort of traditional Chinese medicine guys and natural paths and just exploring.

And I understood at an early age that there was beyond taking a pill right. Because he taught me that. And so I carried that with me. And as I aged and I started to see my children, and I was in a completely different industry, I was I built a marketing and PR company in Toronto, where I live.

From chronic illness to genetics

I started to see that I was getting sick and the same stuff that was happening to my dad when I was young, you know, multiple conditions. And I realized I'm not going to go down that path like my kids are, you know, two, four and eight years old at the time.

They're a little older now. I want to be here for them. And so I literally dove in, healed myself because I was taking for different pills, six different doctors, all these, you know, everything was treated as a siloed, separate thing when they weren't.

And the thing that triggered the moment was in my my mind, my DNA, my genes. There's a literal page missing from my instruction manual. So that that human instruction manual that's in all of our cells.

And sorry, I'm dragging this all, but I'll finish with this is that that page was missing. And when I found that there's a specific set of genes that I needed to deal with environmental toxins, and I didn't even have them forget about what version that was the one thing that made all the conditions go away, because now I knew what to do.

And so I literally walked away from our marketing company. I handed the keys to my business partner. I said, keep it. I found what I got to work on and I never looked back. Wow.

And you, you speak to something there in terms of your relationships with your families and just being present that I think is so just acutely relevant for our folks suffering with dementia.

Is this desire to be there for the generation behind you, to show up for those baseball games and those graduations and those birthdays, right, for as long as possible, and to and to really cognitively and emotionally be fully present.

And so I think a lot of people listening here can relate to that. And your story. Tell us about the genetic tests that you offer through the DNA company that are relevant for somebody suffering with dementia?

Sure. So genetics. So when I first landed on genetics is being sort of the answer. I was firstly disappointed because I got these results back that were and people listening are familiar with this stuff.

You got an 80% chance of Alzheimer's. What does that tell me other than like I've ever desired for the next 30 years? Waiting to see. Right. And why are you telling me with something as precise as my DNA, that you can only get me to 80%?

So what we understood is that genetics did a really good job of identifying genetic conditions, meaning that there's a specific gene switch that's on or off, and it directly equals a problem.

Something like sickle cell syndrome. You have the wrong switch. You have it right. You're not born with Alzheimer's, diabetes, cholesterol issues, all the big chronic conditions, which is 90% of our health care spend.

These are things that you get over time for making the wrong decisions. So the question is, what is the right decision? So that's where I learned, again from using myself that this was what was missing from genetics and why I sort of funded and built this company, because I understood we were asking the wrong question.

It shouldn't be. Tell me, what am I at 80% chance? Risk of it should be. Why did 20% not get sick with the exact same genetic profile? That's so deterministic.

These are my genes that instruct every cellular process of my body. And 20% didn't get the problem. Yeah. You know, focus on what happened right with them versus focusing so much on what happened wrong with the other 80.

Exactly. If you're if you're in the health care business, it should be about how do I maintain health? What we have is a sick care industry, which we hear all the time, which is how do I manage the sick, right.

So wait for you to get sick and then mascot and mask and mascot versus let's figure out what the 20% did. So that's the research we did and partly why we're based in Toronto, because it's such an ethnically diverse city and it's fairly large in terms of Canada.

Why genetics should guide prevention

And so we studied the environment, nutrition and lifestyle habits. Of the 20%, you have the same bad genes that put you at risk, but you didn't have a problem.

What did you eat? How did you exercise. What were the exposures. And then we mirrored that against the environment, nutrition, lifestyle, habits of the sick.

What were they doing wrong? And then you get a very clear answer. So that anxiety of I don't want a DNA test because I don't want to know if dementia is coming versus here's why it may come.

And here's exactly what the 20% did to not get it. That's actually powering right. And so tell me a little bit more

about your personal story. So you found out that there is a page missing in terms of how you detoxify.

And on this summit we're talking a lot about toxins and a lot about how to get rid of them. And unfortunately, you know, this can get kind of depressing because we live in such a toxic world.

But when you have that empowerment, it's like, okay, it's something's not quite working for me. This is what I can do about it. Right. What's your process around that?

So when you have sort of a genetic, weakness, let's call it, you're either have a bad version of a gene or you're missing a gene. But it's not a genetic condition.

It just points to bad cellular function, meaning that if you do the wrong thing, you might eventually get sick. You have a couple of choices. You can either increase capacity, which means eat the right stuff, take the right supplements, which a lot of it has to do with to increase that gene.

That's not doing a good job, right? Make up for it or reduce the input of the wrong stuff. That because you had the bad version of the gene you can't handle, or maybe a combination of both.

Exactly. So that's the ultimate. But a lot of people can't handle that all or can't maintain it. They can't comply. So do it's easier for you. So it starts with knowing what those choices are.

And to give you an example, using myself like you asked. So there's the glutathione, the thyroid process is where, you know, time is in your blood, binding on the toxins, sending them to the liver, metabolize and get rid of them.

It's kind of like when you drink alcohol. Everybody already knows your liver cleans that up. Well, it cleans up a lot other things too, right. So in our office, I used to get these crazy migraines.

This is before I discovered all this. To the point where the only thing that would heal me was I would have to vomit from the pain. Because, you know, the brain and the gut are connected.

And the brain, the body would be confused, thinking, I vomit, I'm healed. And then I go to sleep and crash. My business partner would then drive me home.

And this happened regularly. And one day I asked myself, why doesn't he have this problem where the exact same age, right? And it was in my genetics that I discovered that the GST, GST, TM, GST genes or glutathione genes of the GST on and gst m1.

And we're going to actually put some focus here because that whole how does the gut and brain connect and how does that lead you to venture. There's really good stuff to know here.

I'm missing these. You forgot about what version. I don't even have the right. So I don't do this process in terms of, you know, things that I breathe in and things that enter through the gut, kind of the two main areas other than your skin where things enter your body.

My business partner. So what did I find out was that in our building in the basement, there was a manufacturing company that was pumping chemicals into the air right.

But why did I have a problem? And he did it because he had an extra copy of this. Gene, forget about having the normal version. He had an extra copy. It's called something called a copy number variation.

So people listening here are probably more in tune with testing. And you've heard of a snip, a genetic snip, which is like that spelling mistake. That's literally a spelling mistake in a 20,000 letter long gene versus you don't have the gene copy number variation.

The whole thing is missing, or you have an extra copy of it.

Detox pathways, toxins, and migraines

So now that process is being done twice as much, right? So that's what I discovered, that he had an extra copy. I didn't even have it. So now look at the outcome.

Crazy migraines to the point where I vomit. Don't even notice. Wow. Exact same environmental exposure. So imagine if I stayed there, right? Imagine if I stayed there and I just suffered through it.

I migrated, so I got to take a pill. That's what I do, right? That's that's the belief. What would have happened to my cellular health? The damage of not clearing those toxic chemicals, the neural inflammation that could eventually lead to something like dementia.

So to answer your question, sorry, what did I do about it is I understood what I couldn't deal with. And I first of all eliminated those things. But I also started to supplement heavily.

It's sort of a kind of like emergency, like heavy, heavy supplementation. I've like clear, let's get rid of everything. And then a maintenance protocol to make sure that what I don't do genetically, I'm making up for what supplements.

And then this starts to get pretty complex. And DNA sometimes it's like that. But if you have a missing copy of a gene or a copy of a gene that isn't functioning a variant, we'll call it not a mutation, but like a very good fit means that you don't detoxify as well or you don't.

You know, something doesn't work quite as well in your system. You maybe you create more inflammation like in the body for for genetics, you create more beta amyloid plaque.

And so then when you start to layer this on top of other things that put you at risk for dementia, then all of a sudden we have like a perfect storm where maybe one person will get mess or somebody else will get dementia, or somebody else will get autoimmune disease.

But now that we have these layers of like, not optimized function, then that's when this manifests as chronic disease. So understanding what we're kind of set up for and doing something about it before it happens puts us in the optimal spot.

That's exactly it is that all these things layer and stack and then they compound on each other, and then eventually there's that threshold where your body's called body's resilient.

Right. That it's coping with all this stuff. But you get to the point where it's too much. And then that one catalyst, the thing you ate or something like Covid, for example, a very powerful trigger that takes metabolically unhealthy people and puts them in the hospital who didn't know how unhealthy they were.

Right. So it's that trigger that takes you over the threshold, that line where it's too much. And so going back to the gut, because you mentioned it, you know, there's a gene called TM one, which really determines how well you have that first line of defense in the gut.

And there's so many people that talk about, you know, the inflammatory load caused by that sort of something as simple as eating hummus. People think, oh, it's healthy.

Yeah, but they use chemicals to dry the chickpeas in order to ship the scale. Right, in order to store them so that they last. Those chemicals are highly toxic, potent, potent toxins against some people.

No problem. Some people. Hey, every time I eat hummus, I get bloated, right? Because those toxins in your body can't clear cause that inflammatory load.

Everything goes crazy, the microbiome goes nuts, and all of a sudden that leads to a bit of leaky gut. And that

leaky gut leads to toxic substrates in the blood and those toxins and get to the brain, and they can cross the blood brain barrier.

And all of a sudden there's neural inflammation that then leads to what we're talking about today. So all of these little pieces, if you're doing four or 5 or 6 of them, you're going to just get there a lot faster, right?

You have to know about everything. Well, yeah. And that can start to feel a little overwhelming. Right. But we're playing a complex system science approach, right?

There's a lot of interconnected pieces here. And if we start to leave them out, then we get conventional medicine right where it's like one pill for one ill and it just doesn't work.

And so when we get to put the pieces back together, when we start collecting data in a way that's meaningful and accurate and, and works, then we can we can get this improvement in other ways impossible to cure or impossible to reverse diseases, which is super exciting.

And I what I love about what you guys do is you make it digestible, right? You guys do this incredible work using the DNA, but you also present it in a way that isn't so confusing for people.

So talk a little bit about that. Yeah. So the well, that's one of the things that I found personally when I was first started sort of exploring this whole genetic world, it was so hard to use, meaning that, remember, genetics is built by geneticists who are scientists and PhDs who do a really good job of studying things in a lab.

They're not really good at talking to people, right? And helping people. That's not their job. So they don't have to think about that.

Gut health, inflammation, and dementia risk

So the products that we used to get the reports were designed for them. Right. Here's a bunch of data that needs to be interpreted. You got this version of this gene, this version of this gene, this version of this gene.

Now they understand how those things correlate in the maps and all that. But to the layman it's like, what is all this gibberish? Right? So that was my experience.

And I realized that all I needed to know was what's wrong and how do I fix it right, right. That's it. That's simple. And maybe even a third layer of once I know how to fix it, how do I actually stick to it?

Like, what are the behaviors I need to adopt that habit change, right. So, I thought about how would I want this? And then by the way, the the other thing we did is I actually spent 3 or 4 months interviewing 80 different doctors to ask them, tell me what's wrong with genetics?

And they all kind of got to the same. Thing is I don't have time for it. I my staff doesn't. They're interested. I don't can't do the training and the courses.

And it kept going back to the same thing is that interpretation interpretation, interpretation the product the report is really what you're getting, not a test should be easy to use.

And that's the whole point. So when we built the reports, we realized we had to build an AI, an artificial intelligence tool, to program as for what you're thinking, should I be on a keto diet?

Anxiety addiction, you know, body type? Think about sleep. Well, why can't I sleep better? And not just why kind of sleep? Why can't I fall asleep? Why can't I stay asleep?

Why do I sleep through the night and not feel right? Those are the things people are actually worried about, right? Including myself. So I built it from day one, thinking as a layman that I was.

Here's how I wish it was. And I argue no, that you don't need anyone to interpret it for you if you delivered it the right way. That's the whole point. Make it easy to use. That's what we've done.

So then from what I'm hearing, it's you kind of cut the doctor out. So can can patients come directly to you get their DNA and it tested and then get that report.

Or do they need to have a doctor there with them. So there's kind of two answers that you don't need a clinician. Meaning that the reports that we provide or you can understand them.

We have tons of people that email us saying, I can sleep at night. Finally, I feel better. And my fibromyalgia, whatever, whatever they're dealing with is just better.

At the same time, there's certain things that we cannot say directly to a consumer, so there's certain recommendations that are more clinical and prescriptive in nature.

And we have a separate report that if it was ordered through a clinician, we provide only to the clinician. And what is it? It's the same information but reinterpreted for the red flags.

Here's where you need to focus with really sort of powerful recommendations that are personalized for that problem. So we can't give that to the patient because they're not our patient.

So unless we were to open a clinic, which we have no intention of doing, you know, it's clinical level information. So there's kind of two things. People come to our website and buy a test, they learn and they fix.

And some people go through their functional medicine doctor or integrative doctor and they get a little bit more. And that sounds like also a great way to keep it safe, right.

So that people make sure that if there's interactions with what they already know or medications they're already on, that we just double checked and triple check through a provider who's been well trained for that.

Exactly. So then tell me about somebody who's already done 20, 23 me or Ancestry.com, or like they looked at their DNA through some sort of lens because they're curious.

Do they then do your test as well or is there a way to use existing data? How does that work? Yeah, so there's a bit of a challenge here where most of these genetic tests so so here's a dirty secret of the genetic testing industry.

And most people know this already. The genetic testing industry is not designed for the consumer. It's a data selling business. Right. So when you as a consumer go by most genetic tests, the product that was designed wasn't with the interest of what do you need?

It was what data does the guy that's paying me $5,000 per data set versus the $200 you're paying to buy the test? What do they need? Because that's the the windfall.

And so these tests are designed for data collection. And that's when you when you get the report, it's a bunch of genes. This gene means this this gene means.

But that's not the way the body work. That's not 22,000 independent genes, which is how many genes you actually have doing independent things. It's systems.

There's a cardiovascular system. There's neural pathways, chemical. There's hormone pathways. They're already determined. So when we get data from those tests, they don't work on our AI for two reasons.

Making genetic reports usable for consumers

They don't test for what we test for. So you remember in the beginning we talked about the snip, that spelling

mistake in the gene. That's one type of variation.

We also test for what's called a insertion or deletion. A endo is called meaning that a whole paragraph is missing or there's an extra paragraph. So imagine that the snip is that impactful that they test for.

How much more does it mean that there's a paragraph missing? Or we also test for what I spoke of earlier a copy number variation whole page is torn out.

You don't even have the gene or have an extra copy of the gene. So without that information, we can't give you our reports. Right. Second thing is the pathway or system interpretation.

So as opposed to a bunch of independent genes, we look for things like hormones, which don't mean much on their own in terms of do you have to look at the system, the pathway.

And so there's some things that can inform. So kind of 60% of what we tell you. But to get it from that, hey, you got an 80% chance of Alzheimer's. Two. Here's 100% how to avoid it.

You need to test for more. And that's what we do. So then what about your company? Do we need to be worried about you selling data somewhere? Is that part of your model? Yeah.

So this was a big sort of decision because it is very lucrative to do that. Right. You know in 20 1923 and we got funded $300 million by GlaxoSmithKline.

And you wonder why. Right. Why did they invest $300 million into them. So we could have easily gone down that path. But what we said is that we actually see an opportunity, because when somebody hands over their DNA, their belief is you're going to mine that for me and tell me everything I need to know.

That's the expectation they're not getting that they're underwhelmed. And then they kind of shove it in a drawer and don't look at it again. So we said is we can be those people.

We can be the people that do such a good job of interpreting it that you're going to stick with us for coaching, for supplements, for other things, and we don't have to be a data selling business.

We can be a service company that helps you with everything else you need, because we understand you at the genetic level. That's exactly what's happened is people get their DNA, they get their reports, and then they come back and say, hey, I need to lose 10 pounds.

What's the best way to do it? My mother had breast cancer. I'm worried about that. Can you look at my DNA and figure that out for me? And we start to help them build these programs and get them better.

And we've gone so far down that path that data selling isn't even a thought. Okay. And then so what about security? I know a lot of my patients will say, well, I'm worried that somebody is going to know about my DNA and then I'm not going to be able to get insurance or something's going to happen down the road.

Do you have any thoughts about whether or not people should be worried about security on that end? So it comes back to the same thing where if you're in the data selling business, everybody's your customer.

Anyone that's willing to buy that includes, you know, police forces, government organizations, insurance companies who everyone's willing to pay because you've signed consent, your data is for sale.

So, again, to the same point where we send out our test as a, what's called research use only, meaning that it's not a data collection and selling tool.

It's something that we use collaboratively with the patient to research for them. Right. Luckily in Canada, there's more laws and protections around people using DNA to make decisions.

For example, insurance companies aren't allowed to do that. So yeah. So we've just we've taken that path. We're by acknowledging that we don't sell data.

All of that is sort of out the window. Not possible anymore. Got it. So people can be am I? If I'm hearing you correctly, people can be sort of assured that if they use your company that their data won't be sold and that there won't be issues around security around around it getting out.

What about your data base? Do they need to be worried about that being hacked? And so yeah, the same thing is our database. It's all anonymized aggregated.

So we've been very careful to.

Testing options, clinicians, and data privacy

So we actually did something really interesting. One of the great things that I really enjoy about what we do and how we built this company is the people, our team.

So in every sort of aspect of how we grew, we found the best person that we could to do that thing. And I'm humble enough to acknowledge all the things that I'm bad at, right?

So including technology, security, all that stuff. So we found a gentleman who actually was a the head, AI architect for IBM. Oh, wow. Yeah. He was also the chief technology officer for our hospital system.

A bunch of hospitals somewhere on the East Coast. So he had really cool healthcare experience because he ran this whole bunch of hospitals, technology and security.

And he was an AI architect from IBM, and he led a big team there. So we asked him, what's next in life for you? And he said, I don't know. But so we what we said, we know.

And we ask, can you join and help us bring your knowledge? So he actually built all of that. So he built our data security. And the test was Royal Bank, which is Canada's largest company.

I think there's something like 80,000 employees. We are working on a project with them. And the test was, can we pass their security protocols? Right.

Because you can imagine how important employee data is to an organization that big. And we did. So it took us one year of building, building, building.

And now we're officially a vendor. And we work with them. So it was a big milestone for us. It sounds dry and boring, but it was a lot of fun. Congratulations.

Yeah, I know, I can relate to that. Like building, building and building and creating and iterating and making sure that you're just I what I hear from you is just commitments, like doing it better, doing it with integrity, doing it to serve.

And I think that that that's like what comes across and what feels so exciting about what you guys have to offer. So if, if someone wants to learn more about the DNA company, how do they find you guys?

So we, we for the purpose of what we're doing today, we, created a link that people can go to, to get a discount, which we don't normally do. So if you go to our website, there's a retail price.

I think it's, $400 for the test. And if you just go to the DNA company.com. So the DNA company.com/rs, which is, you know, you're the summit, right? As, then anyone attending the summit, when you get to the checkout, you'll see a discount built in, and in terms of what you get, we believe that there's sort of six core systems.

And this is after, you know, studying people. And one thing we never mentioned that I should our research model, which you asked about earlier, is we said instead of studying DNA, let's study people.

There's enough information about there about DNA out there already. We can go look at publications and pull them and just interpret them better. So we said what was missing was the humans, right.

How does this actually apply? And so we spent three years studying 7000 people, which is the largest study of its kind in the world. We met literally 7000 patients with their health story in one hand and their genetics in the other hand, and understood how those things come together.

So because of that, we learned what the main things are that people need to know. And over and over and over again, when it came to I want to be the best version of myself.

I want to add ten years to my life and ten healthy years. How do I do that? It came down to six things cardiovascular health, which affects 50% of people, which in a big way includes what we're talking about today, which we can touch on.

If you'd like, hormones, which is, you know, how do I put on muscle? How do I burn fat, hair, skin, which speaks hugely to longevity. How do I have vitality as I age versus frailty.

Right. Diet, nutrition, keto diet, vegan diet, paleo diet, low carb, high carb. What am I supposed to do? You know, why do why does that person have diabetes?

That person doesn't. So everything about the genetics of nutrition for you as a personalized individual is in there. Then mood and behavior, which is probably the biggest report.

It's everything from addiction to anxiety. And I'm going to actually give you an example to show you how this works. Maybe it I'll use would have behavior as an example.

And then cellular health immunity detox and immunity. So how do you detoxify how do you methylated you with inflammation. How how healthy are your cells?

And what do you need to do to make sure there's no inflammation, which is a root cause of disease. And the last one is sleep, which we built unintentionally.

Security, anonymized data, and enterprise validation

We didn't actually think of sleep as a genetic issue. But what we realized is, as we were healing people, one of the things we kept hearing was, I sleep better now, right? So it was an unintentional outcome.

But we realized that the things that we were doing with them genetically were either helping them fall asleep, stay asleep, or sleep through the night and feel better in the morning, which these really kind of three buckets. We found.

So those are the six things that people kind of go through. And within each one of them, there's all these micro things that we look at, and then you come out the other end.

A new version of yourself. Right. And I said I would give you an example using mood and behavior. So again, using myself as the guinea pig, when you think of neurochemicals, in our report, there's a section that talks about addiction, that talks about anxiety, that talks about depression.

And these seemingly are three different things, but they're kind of all rooted in bundle up from the same neurochemical. So dopamine is a chemical that allows you to feel pleasure, but it also allows you to feel reward.

I did something good at work or I ate some tasty pizza. Right. One of the those two things. In order to experience

that you have to bind it. So there's your there's these receptors in your brain and there's a gene called DD, D2 which determines how dense those receptors are.

How many do you have? Then there's a gene called MPO which comes along and breaks the dopamine down. Right. Which because you need to get back to normal eventually.

Then there's an enzyme, a gene called Comt, which comes and sweeps it away. It's like the broom which also does this for hormones. And you know very well it does it like for for multiple things.

It also helps in methylation. So I have the lowest version of two. So the very sparse least density of receptors. So I don't really feel the dopamine I had the fastest Mo and the fastest Comt.

Oh my gosh. Like you know way down here in the last night low. So I'm a prime candidate for depression. And guess what. All three outcomes I've had all three depression I've been depressed.

Addiction because I go down the pleasure route, or achievement because I go down the reward route. And why did I have all three? This may be the most important thing we talk about today is context.

What your genetics are, what you're capable of. Your outcome is the load you put on your genetics, the context not only your environment, nutrition, lifestyle choices, but even where and who you're with.

So again, using myself as an example, when I was younger, I grew up on in poverty, working hard, but parents weren't well. And my father, like I said, was sick a lot.

So, you know, I was constantly kind of like, not really that motivated, didn't think so highly of myself and became addicted because a friend showed me something for my birthday that, you know, that I ended up smoking and got hooked on it.

Right? So that let me know this addiction path in my teens, what shifted gears was my father died when I was 17, and all of a sudden I became responsible for my family and I had to work.

And then I went down this reward path. I started working and working. Whatever I did yesterday wasn't good enough anymore because I don't feel it. And I built a business I didn't even realize I had built.

Then what? I one day sat back a few years later like, oh, I have like people that work for me and I make decent money that can take care of the family.

So I started to become a little complacent. That's when I became depressed because I wasn't. I was avoiding the pleasure addiction and I wasn't getting the reward, so I didn't want to get out of bed in the morning.

I didn't go to work. I felt depressed, like there's no point to all this, right?

How to find the DNA company and what it offers

And that it wasn't until I understood genetically how I was wired that I don't have any of those problems. No reward. Great. I still work hard, but I now manage it.

And I'm not addicted to work. Right. But understand that this is why the you have an 80% chance of Alzheimer's is so not true. There's the the genes that drive the the processes that gives you risk.

Your greater everybody has risk. You just have greater risk. Now your environment nutrition, lifestyle choices are a load that can take you from healthy to sick.

And then the context you're in will drive your choices. And this is a brilliant, just illustration of epigenetics is what we say in the industry. Right?

So if you've heard the word epigenetics, what Kashif is describing is that it's that your genetics, kind of the way the analogy I use is that if you have plans for a house like you have the the architect has drawn the plans and that's your DNA, that's your DNA, that's like the coding for or the instructions, like what you said for how to build that house and then how that house manifest, like doesn't have carpet or what if you're in the mountains, does it have a happy family in it or sad family in it?

Right. Like so is it tile or, you know, like what color is the paint? All of these things are the epigenetic. So how it actually manifests in the world or the phenotype is what you're describing and that there's there's this interaction between them.

Right. They're both really, really important. And so and then how we, how we optimize for those instructions is what really like in, in that's what matters most when it comes to how great our experience of life is.

Yeah. That that is your net result or your outcome. And this is exactly why we say that if you're born with risk, you weren't born sick, right? You could have the worst cardiovascular profile in the world.

But you can live on a beach eating fish out of the sea with no stress and great sleep. You're not getting sick, know, right? You have to put the load on your weak genetics.

All we're saying is that there's more risk. So you need to focus and pay attention on that area, that red flag. So your genes will tell you where to focus or if you're already sick, they will tell you why and what to do about it as opposed to just taking a pill.

The basket. If you start to make the right choices, not only can you prevent, but you can also reverse disease, which is exactly what we're talking about right now.

I was just going to say that that's exactly why we're here together is because what you're what you're describing are the tools, and it's also the narrative.

It's so consistent with our story that if you understand why the disease process is happening, if you understand what set you up for that or what's about to set you up for it, if we're in prevention mode, which is such a luxury, then you can have it that you can make empowered decisions to reverse or prevent a chronic disease from happening and taking place versus being in a neurologist office being told there's nothing we can do, get the affairs in order.

I'm so sorry, but this is going to be torture until it's over. You know? It's it's just preventing that suffering is I think it's why you and I both show up.

Yeah, exactly. And we. I see it every day, and I just the pain that we feel when every time somebody comes to us with their parent or their uncle or whoever, and they've been told that this is just it's happening, right.

Get the family ready and then we're able to stop it in its tracks. Right? And they're like, why? How did you like that? Our doctor. Yeah. Your doctor.

They're not armed. And it's not really their fault. We have an acute care system that does a really good job of masking problems. You go to the hospital with a broken arm, they're going to fix it.

But that same toolkit is applied to chronic disease. Wait for it to happen and then fix it. Right. Which is the wrong way to deal with chronic disease.

You should never have it in the first place if you understood why. And that's the number one question we don't ask. Why? Because that's not in the toolkit.

We don't deal with the why are you only deal with the what? Like how do I mask whatever this thing is so and why starts and the why again is not the same for all of us.

This is why genetics are so important. Because do I focus on my gut? Do I focus on insulin? Do I focus on toxicity? Maybe a little bit of everything? What do you actually need to do and is just like that?

The classic example of that. Right. Like, well, we need to know. And if it's an issue for you, if you're insulin regulation, your blood sugar is an issue, then yes, we need to focus on that.

But if it's not, then we need to look at hormones or traumatic brain injuries or toxic burden. And those things can all be impacting how your DNA expresses itself and what disease manifests and how you get out of it.

What is the toolkit that we need to put into place? What is the plan we need to put into place to optimize all of this? What you just mentioned made me think of something where.

Mood, behavior, and epigenetics

So there's a family up here in Toronto that runs something called the Women's Brain Health Initiative. You know, I don't know if you're familiar with them, but they're, you know, Canadian organization.

They're they're funding research. And what they're saying is that 80% of the research dollars for Alzheimer's and dementia are spent on men, 80% of the sufferers or, you know, are women.

Right? It's that's where the cases are. And we're assuming that women are men with different reproductive parts. That's medicine versus why is this happening.

So you spoke of hormones. What do we see over and over and over and over again? Why is it that 66% of women will die on their first cardiovascular event, and most men will actually survive?

Why is it so much worse for women? And there's no previous symptoms, no warning signs? Heart attack diet 66% of women, they get it right. Same thing with Alzheimer's. Dementia. Why is this so much worse for it?

Well, women are more estrogen wise than men. We already know this. Not all women. Right? So some women in that hormone cascade, progesterone converts it testosterone and then becomes estrogen.

Men do that daily. Women do that monthly. But it doesn't end there. The estrogen before you clear it becomes a metabolite. Either two 4 or 16 hydroxy estrogen, as they're called.

Two is great, clean and healthy. That's what you want. Four and 16 are toxic. 16 being more toxic than four if that's what you do. You convert your estrogen in.

First of all, are you estrogen dominant? Were this the gene that tells testosterone are converted to estrogen, you have a faster version of the gene. So that estrogen pool is just a lot more heavy, which you know that that would be the woman with bigger curves.

Nice skin, nice hair. Right. Or the more androgen or testosterone dominant woman that doesn't convert industrial good. Well, slimmer frame, kind of like yourself, more chiseled jawline.

You know, features are obvious. That's more androgynous. Right. So now the woman that's more estrogen dominant if she's also converting into an estrogen toxic byproduct.

And then guess what? When you're menopausal, you don't have a monthly cycle anymore to get rid of it. What does your body do with this metabolite? It stores it. In fact, it tries to keep it away from your organs, right where your brain is made of fat, you know, so these these toxic metabolites that are free flowing through your blood, would you no longer have a menstrual cycle to clear, but you're still producing all of a sudden.

Cause that additional. This is what we talked about. That threshold. How many things how many fronts are you fighting for? Women. There's this additional load that men don't want, for the most part, have to deal with.

Some men do, but for the most part they don't, which is why women just do so much worse with this particular condition. So again, remove that and look at the load you just took off.

And it's really it's really I think about balance as well. Right. Because women also they have the estrogen and progesterone production. And then they drop off a cliff with menopause.

Right. And that impacts on the brain can be a really. And it's so many women that I talked to are like my cognition that started to decline when I went through that menopausal transition, that brain fog.

I haven't been able to get rid of it since I turned 50 and stop getting the cycle, and that you know, there's there is a lot of good literature saying that we should actually be replacing estrogen and progesterone and testosterone for our women who are postmenopausal for brain health, for bone health, for a lot of reasons, for that vitality that you were talking about.

And to your point, we need to make sure that you can metabolize it and get rid of it so that it doesn't accumulate in a toxic neuro sanitary way. So working with a good provider, having that great data from within its DNA or serum or urine or saliva or wherever you're getting it from, understanding what's going on in the system so that we can optimize again, optimize function and get the right signals into the cell, get the wrong signals out of, like you mentioned, with toxins, you want to make sure you can get rid of it and you want to stop it from coming in.

Women's brain health, hormones, and menopause

So just creating that balance at a cellular level, I think is is the goal for sure. It is that finding that optimal place for yourself, right. Getting it, turning those dials, either improving capacity or reducing the insult.

Right. Whatever that toxic thing is that's causing a problem, you find that balance and you're just going to be a different person. It's amazing and it's so exciting and such an exciting time.

We were talking before we started recording it, just how how fun it is to be able to think outside the box because like, the box isn't working. We're not getting solutions for things like dementia, so we have to get outside of it.

And it's it's really fun exploration. I get to meet really incredible, inspiring people like you, and I'm just grateful to be on this journey, accompanied by you working so hard to reverse irreversible diseases and, and really shift the health of, of everyone we touch.

So thank you so much for joining us and spending your time today. Oh thank you. This is what you're putting together here for everybody is incredible.

You know it's a blessing to so many people because people don't have this information. They just think, oh this is what I got and I'm taking a pill and it's going to get worse.

But you're helping so many people. This is amazing. So one more time, let everybody know how they can find you guys. Sure. So go to the DNA company.com.

The test is called the 360 the one we're talking about. There's other products there like coaching and supplements and things like that. But what we're talking about the core foundational test is the 360.

So the DNA company.com/r a s the reverse Alzheimer's summit. Exactly. And then you will at the checkout you'll see a discount built in for anyone that's attending the summit.

So generous of you. Thank you so much. Yeah.