AI And The Future Of Personalized Health: Navigating A New Era Of Wellness Transcript

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Introduction to Naveen Jain and Biome

Hello. Everyone. Doctor Jack Wolfson, cardiologist. Welcome back to another episode of the Heart Attack and Stroke Prevention Summit. And I'm really excited because I'm going to interview someone who I just met before this call, but I've seen him speak before.

And if you don't know Naveen Jain, I'm not sure. You definitely have not been in the health space. If you're in the sickness space, you probably have not heard of him.

But if you've been in the health space, you certainly have. So the Queen Jane is an indomitable force fueled by unyielding, curious, and an unwavering commitment to propel humanity toward a future of limitless possibilities.

That is a big statement there, but I know that he believes in when you give the body what it needs, take away what it does. And that's where the success, really stands.

And again, you know, Naveen is at the forefront of innovation in health and wellness, and that's what I'm so excited about. He is the founder and CEO of a company called volume.

And volume is the worldwide leader in gut microbiome analysis. We'll be talking about that and where Naveen really is kind of, looking at things right now and we'll delve into is this AI driven approach.

So this, this using computer technology, artificial intelligence, to be able to interpret just mountains of data that we'll discuss as it relates to the gut microbiome.

So again, to me, and I can talk about you and shout out your praises and all the stuff that you're doing. And we can delve into all these different things. But, all right, listen, as we, as we start off this conversation, because I know, I know you've got health issues that have, you know, you know, again, affected your father, as you told me.

But on your website, I love this. Imagine a world where health is optional. Unless it's optional. Right. And that's the beauty is nobody has a problem.

Then you see, he tells, you know, health is something you can control. Health is something that's optional. You can work out, you can do things, and you can be healthy. Right?

But when you tell someone, what if the illness is optional? What about being sick is truly a matter of choices you make every day? Not a matter of bad.

Not, you know, and we as humans have some have this tendency to blame our ancestors. I just have bad genes. I am born in India. I am bound to get heart disease.

This is just genetic. And what's really interesting is that Jack is that's less than 5% of the diseases are truly genetic diseases. Even on a chronic diseases, the impact of genes is less than 10 to 15% and 85% to 90% is really about lifestyles and truly about nurturing.

Genes, Epigenetics, and Disease Risk

And that's the key. Key is don't blame yourself for having bad genes until you have control of how these genes are expressed. And if you can control how the genes are expressed, you actually don't develop a disease.

I love that opening statement because I am 100% in agreement with you. You remember back in the 1990s when they were doing the, human Genome Project and they were trying to discover all the things about, you know, the genes.

And at the end of the project, they discovered that it's not your genes, it is all the epigenetics. And, you know, a lot of, very, very, well known powerful people.

What why why are the doctors why are they traditional or or the conventional medical doctors? Why are they always blaming the genes? What's the first of the two things here?

So our medical industrial complex, which really is a medical industrial complex, makes money. When you and I are sick and no one makes money, when you and I are healthy, they have no incentive.

The minute you are healthy, neither doctor makes money. The hospital doesn't make money. The pharmacy don't make money, and the pharmaceutical companies make no money.

Nobody has incentive to keep you healthy and everyone has incentive to keep you sick. If you develop a chronic disease like diabetes, they probably have a machine that's catching the lifetime subscriber coming up.

You got heart disease, catching the lifetime subscriber coming up. Right. And they basically manage the diseases rather than understand what's the root cause of the diseases and actually fix it.

The interesting thing is our fascination with DNA started because we all believed that DNA is personalized to you. It is the software of the human body.

And what we realize is your DNA never changes. So for example, when if you do my DNA test today and God forbid, I get 200 pounds, my DNA is still the same, then I become diabetic.

You do my DNA test again. It's still the same DNA. Now I get a diabetes. I get heart disease, I get depression, I get anxiety, and then I die. Under the years after I die, you do my DNA test again.

It is exactly the same DNA. Can't even tell who you are, dead or alive, let alone are you healthier or sicker. And what's really interesting is think of DNA like an alphabet and expression of the DNA we call RNA is truly the story you are writing.

You can take the same alphabet, you can write a romantic story, or you can write a thriller. And that's the story we write every day by the choices we make every day, the foods we eat, the stress, the exercise, the sleep, the purpose.

Every one of these things changes who we are and how our genes are expressed. And just for the common people who may not understand what I'm talking about gene expression, think of it this way every part of our body is identical DNA.

So my hair, my skin, my neurons, my kidney, my heart, my, you know, nails, everything is identical DNA. Yet I don't have the eyes growing on my fingers and the nails growing on my head.

Why is that same DNA is because when the certain genes are turned on, certain genes are turned off. They become completely different parts of the body, and that expression can actually be controlled by the things we do in a day to day life, which is called gene expression, RNA, money, all that stuff.

I'm going to talk a little bit about how that impact the second thing, Jack, I want to bring up that I think will be really fascinating is 99% of all the genes that are expressed in our body don't come from our mom and dad.

They come from 100 trillion microbes that live in our gut. They live in our mouth. They live all over us like these hundred trillion microbes express anywhere between 2 million to 20 million genes, compared to 22,000 genes that

are expressed by, human human genes right now.

Think about that.

Microbiome Testing and Personalized Nutrition

99% of everything that's happening in your body is not coming from your mom and dad. So stop blaming them, right? It is really about the things we do to not solve this.

All these things impact each other. And I'm going to actually, you know, one of the interesting things we have done, Jack, is now, as you mentioned at Wild, we started this company eight years ago, and it started out of a sheer stat story of, watching my dad die.

Eight years ago, my dad was diagnosed with stage four cancer and it was a complete shock to us because there was no symptom he had and now he is given three months to live.

And unfortunately, that's all he got. And it really got me thinking, why is there no tools available in this century to able to detect early stage, stage one cancer, or before he even developed the cancer?

And why is it then? I just took it for granted that as he was turning 80, of course he's going to have diabetes. Of course he's going to have heart disease.

Of course he's going to have high blood pressure and all these chronic diseases were just meant to happen. Until you start to think about is that, look, we as a human species really haven't changed yet in the last 100 years, more and more people are getting sicker and sicker at younger and younger age.

And there's got to be something that is wrong with our body. So I started while with one simple belief what if? And by the way, every single great things in life starts with what if?

What if we can understand what changes in the human body at the onset and during the progression of these diseases? And if we can figure that out, what is the root cause?

We can prevent the diseases from happening. We can diagnose them early and God forbid, outright reverse them. And that is what we started wild with. Okay, let me let me ask you this.

Yeah. And you answered it already, but I just want to summarize it for everyone who is listening here is that I believe what you're telling me is that the people who are listening to the Heart Attack and Stroke Prevention Summit, that heart attacks and strokes are not caused by bad genetics.

Am I are we in agreement on that? And we clear. 100% agreement? There's less than 10% component is genetics. I'm not going to say that zero, but it's less than 10%.

90% of the stuff is the choices we make every day. So when we eat foods that actually are causing inflammation in our body, I mean, I can give you great examples.

Some people can eat red meat all their life, live to be 100 and never develop a heart disease. And some people red meat actually causes them to have artery sclerosis.

What is that? And it's really simple. It's basically math and chemistry. So the way we do that is so let me describe Jack. And then I'm going to come back and tell you specifically what happens.

Right. So at while we take a spit of your saliva, we take a finger prick blood and then we touch off your stool. So we're taking the top of your digestive tube.

The bottom of the digestive tube and all around the digestive tube. And we analyze every single gene expression in

your body. So from your stool, not only we understanding every single thing your microbes are producing, not the names of the organism.

Oh, you have Bacteroides. You have this organism. You have a commensurate. Doesn't matter how commensal can kill you or can benefit you, that depends on what is producing.

So a lot of people say, well, it's good for my diabetes. No, no, no, it is the number one reason to get Ms.. It has been proven that Ackerman is directly involved in life and in addition to the whole bunch of mycotoxins we're going to talk about in a second here. Right.

But the fact is, what we analyze is everything that you microbes are producing in your gut, everything your microbes are producing in your oral cavity, and all your mitochondrial gene expression and all of your inflammatory markers, all the cytokines in your blood.

And then we take AI and we analyze 30 million biomarkers in your body. And then we tell you specifically, hey, Jack, don't eat broccoli and cabbage right now because your sulfide production is too high and these things contain a lot of sulfate.

They're going to cause more inflammation. And by the way, avocado may have been superfood for someone else, but for you, it's not very good because your uric acid production for you is very high.

And that high uric acid and avocado is going to turn into a gout or a heart disease. And by the way, despite Popeye telling you that spinach is good for everyone, Popeye is not a scientist.

Don't eat spinach or almonds because your oxalates are not being metabolized. You're better off not eating them, but you can eat red meat if you want, because the choline in the red meat is not being converted by your microbiome into something called TMA trimethylamine.

And by the way, when trimethylamine gets absorbed in the blood, your liver is not express enough enzyme called FMO three that converts a kidney into TMA or trimethylamine oxide.

That is what causes the black and the artery sclerosis in your body right now. Imagine. So you can be very specific why some people can eat red meat. And by the way, the FMO three enzyme, it's expressed is controlled by the B ginger wireless and your auto microbiome.

When it produces something called ginger bean or the vitamin B2 that it's interesting these that when you take these vitamins they are not harmless. They can actually harm you. Right.

So one of the things we learned was there is no such thing as universal healthy food. There is no such thing as a universal, healthy supplement. So we tell you not only what foods to eat and why, what foods not to eat and why.

Then we go a step further, brother. We go through every vitamin, mineral, abs, digestive enzymes, amino acid, and we tell you, take 22mg of berberine every day.

Take 79mg, take 17mg of lycopene every day. And we literally custom make those capsules for you. And only you every month and ship it to you. So think of these.

These are mine made for me. And look at that said manufactured on doesn't say expire on. Every month I get new ones. Then we give you a custom made probiotics and prebiotic made just for you.

These are my oral lozenges that are made for me for adjusting by oral microbiome. And these are my personalized toothpaste for morning and evening to adjust my altered microbiome.

Now people say, how do you know it works? Well, we published the peer reviewed study. So you go check out the American Journal of Lifestyle Medicine, where we showed that in six month people who take the personalized

supplements and personalized diet, their diabetes comes down by 30%.

HBA one see their Q nine clinical school for depression down by 47%, their God seven anxiety score down by 42%.

Leaky Gut, Oral Health, and Whole-Body Inflammation

The IBS clinical score for Ibs-C is down by 48.8% in six month. We completed the placebo controlled, double blind, placebo controlled study and we showed the same thing fasting insulin by 25%, diabetes, prediabetes down by half a percent, IBS done by 76 points in a placebo.

Controlled studies. So you know, that to me is a real science is when you can use food and food ingredients to actually keep yourself healthy. That is tremendous.

And then what would the follow up be like. So somebody makes all these different changes. Do they retest the entire panel down the road? I mean, you're not going to repeat the genetic, you know, component.

So we don't measure any genetics like we are only measuring the epigenetic. So I don't eat. So once we look at RNA it during the RNA is constantly changing.

In six months, your gut microbial expression, your auto microbial expression and your cytokines and your mitochondria, all of that have changed. So basically this is at home best.

You don't have to go to a doctor. It's called full body intelligence. Imagine a world where illness is optional and you open it up. And literally all that is to test is stool, blood, saliva, prepaid envelope.

You ship it to us. And by the way, all these three tests are super cheap. All three complete RNA test for $299, $99 each. That's it. Right. And you retest, we readjust your diet, he adjust your supplement, and then you essentially constantly see on longitudinally how your scores are changing.

We tell you your biological age. We give you your cognitive health, your heart health, your gut health, your oral health, and as much nerdy stuff you want your ultimate toxin production to your acid production, to your LPs production.

We give you everything. Tremendous, tremendous. And I love the fact that you guys are also looking at that very important area, you know, the oral microbiome.

So many people know about the gut microbiome. When I first met my wife, who introduced me to holistic medicine, she said, it's all about the gut, about the gut, about the gut.

And I said, I'm a cardiologist. What what does the gut have to do with the heart? And that's what I thought back in 2005. And now the water microbiome is directly responsible for heart disease, for managing, first of all, nitric oxide is produced by all your other microbiome.

A lot of the diabetes actually comes from your oral microbiome and your auto microbiome. When actually becomes inflamed, you get gut inflammation. And now your microbes are going into the blood, causing constant chronic inflammation.

And chronic inflammation is the root cause of chronic diseases. That's simply. Yes. And you know, one thing, maybe, maybe talk about, leaky gut and how, you know, once you impact the gut microbiome, how that leads to leaky gut, and then leaky gut leads to leaky heart, I like to say where those blood vessels leak, the endothelium leaks.

Maybe we talk about that connection for a snack. Absolutely. So basically, the leaky gut is when your epithelial lining that's supposed to keep the bacteria inside that tube that goes through us when there is inflammation in these boundaries, all these barriers become actually permeable.

So you're able to not microbes are able to travel from the inside the truth to outside the tube. And now they're constantly in the blood. Your immune system thinks it's got a massive infection.

So it's not constantly causing inflammation to protect you. That inflammation, chronic inflammation now starts to impact your heart. To heart is not inflamed.

Anytime something gets inflamed, what happens? All of the cells are now falling apart. So you not able to have everything is leaking from everywhere because now there is no protection anywhere, right?

And that's the fundamental thing is unless you can keep the good neighbors have good barriers. Right. So your microbiome and your immune system, they're able to work with each other as long as they stay in their own place.

When they start to cross the boundaries, problems happen. 70% of our immune system is along the gut lining because our microbes are, by the way, co-evolved with us to help us actually live healthier.

AI, Full-Body Intelligence, and the Future of Prevention

They're not parasite. We could not live without them in fact, the mice that are grown without the gut microbiome, they have a very poor health and they die sooner, right?

Our microbiome constantly digest the food for us. They send the nutrients, signaling they are the one who produced things. Like many of the vitamins, butyrate cannot be produced by our body beautifully.

The end times. Similarly compound is produced by gut microbiome based on the foods you're eating. So our microbiome our gut microbiome on oral microbiome, our nasal microbiome our skin microbiome, they all work together.

So much so that one could argue that even our mitochondria that is the energy factory for our cell, was actually an ancient bacteria that's captured as an organelle inside our cell.

So these are all so your microbiome and mitochondria to always communicate. And that's the reason when people have chronic fatigue or people have low energy people have brain fog.

All these decisions are all connected to how your genes that express the chronic inflammation, your gut microbiome and your auto microbiome. So you mean to say that, right?

The whole body is actually one, entity all communicating with each other, you know, at one time, as opposed to how we learned in medical school was like, you know, there's the heart to the liver and there's the kidneys.

It is it's amazing. And it is very eye opening and enlightening. You know, and, you know, to have those epiphany moments. And I know you're big on epiphany moments as far as where do you think, in other ways.

What, what else is I going to do for us in the health space? Maybe. And I do want to say this real quick to Naveen, is that I know you're the founder of the company, and you're the CEO of a company, and I know what it takes to make a company.

But you sound awfully like the chief medical officer. That you sound like the chief scientific officer of the company. I'm very impressed. You know, by your by your fund of knowledge.

With all due respect. Yeah. So where where do you think the future is going. And the think about. So think about it. But we have now analyzed 1 million, 1 million microbiome and we have now 100 quadrillion, 100 quadrillion biological data point.

There's no human gift ever analyzed this much data. And that's where the AI comes in. So we didn't become an AI company because it's fashionable to be an AI company.

We could not have done what we did without having the AI and the underlying technology that we have for analyzing RNA. There is no private company could have ever developed it.

This came out of Los Alamos National Lab that's, you know, these famous, atomic bomb. They were working on a biological defense project. This took them ten years to develop this technology to protect our country against the bioterrorism.

We took that technology, got exclusive perpetual license, and built wild. And the guy who developed it is my chief science officer, doctor of usage. Then I hired the head of IBM Watson research doctor.

Bonsoir eight years ago to actually do all the AI. So I is what drives us to understand when some genes are overtaxed, some genes are under expressed.

Are you going to produce more butyrate? Are you going to produce more LPs. Are you going to put more stuff like and then we use all of the ingredients in the food ontology and say, when you eat this food, we don't look at the food in the food.

You look at what are the ingredients of biochemical substrate in that food? How are they going to be metabolized by your auto microbiome or your gut microbiome? What are they going to do?

And all that is done through AI. So without AI, this problem could not have been solved. I believe in the next decade we will be able to actually understand what causes every one of these diseases and to be able to diagnose them early, to be able to prevent them.

And absolutely, I have no doubt in my mind things like cancer will become a thing of the past in the next ten years. People dying from heart disease or developing a heart disease can completely be eliminated.

There is no reason for humans to have heart attack or having any of these heart disease. There's nothing in our body that says when you turn 40, you're going to start having a disease.

It is purely the choices we make every day. So in addition to better nutrition, therefore more things that are absolutely essential. And I want to just get that out and then we can have other conversation.

So yeah, I know for sure because because I was going to say that, you know, we've talked a lot about nutrition, but what about some of these other pillars of health.

So basically, just like that, you know, Maslow's hierarchy of products.

Lifestyle Pillars: Nutrition, Stress, Exercise, Sleep, and Purpose

Right. There are five things. But you have to do the first thing first. Right. So basic needs is a nutrition without the right food in your body nothing matters.

You can have a Ferrari. Don't put the right fuel in it. It's not going to drive up. The next thing is stress is stress reduction. When you are stressed your body goes into fight or flight response.

It is body thinks you're being chased by a tiger. What are you do? It's shuts down what it considered in non-action subsystem which is let's not worry about digesting your food.

You're going to be lunch for someone else. Like now. Don't worry about your immune system. It doesn't need to worry about the immune system because you're being chased by a tiger, right?

And it shuts down a lot of the things. So people who are stressed, they get sick more often. Right? So the problem is, in the olden days, the two things happen when you are being chased by a tiger.

Either you got eaten and your stress went away, or you survived and your stress went away. In today's world, we are constantly stressed. Your boss is stressing you out, you go home, your spouse stresses you out.

All right. Your environment is stressing you out in constant stress. Now you're constantly in fight or flight response. So unless we are able to get rid of that, we are not able to actually start to live healthier.

So our job is to remove stress. And many of us, before we eat food, we do prayer. We do gratitude so that we can move from sympathetic mode to parasympathetic mode.

Do the meditation, get rid of the job that's causing you stress, and sometimes get rid of the damn spouse that's causing you stress. Whatever it takes. Like to get rid of the deficit.

That's like the number three thing is exercise. And you don't have to be a gym rat. I'm not suggesting you spend four hours, in a gym pumping iron. All you have to do is get 40 minutes to 45 minutes.

A fast walk, probably uphill. And that's great. And as you are aging, make sure you get two three times off some type of body that used a body weight to do thing, do a pushup, do the squats, do the lunges.

Just do some weights. If you can do that, that's literally all you need that you don't need to start thinking about. I need to spend two hours in a gym.

The fourth is sleep. And again, like many things in life, it is the quality of sleep that matters, not the quantity of sleep. So there is a misnomer. Everyone needs to have eight hours of sleep.

What you really need is one and a half to two hours of REM sleep, and one hour 15 minutes to 1 hour 30 minutes of deep sleep. If you can get that in five hours, more power to you if you need 66.

If you need seven, you do seven. If you need to take it but get a good quality of REM sleep. Good quality of deep sleep I use Aurora, I use eight sleep mattress.

I have all the ways my Apple Watch. I measure my sleep because it's so important to me. I imagine my steps. I measure my calorie because I need to work out right.

And that's the reason I'm 65 and my biological age is now 33. I think. No zero pharmaceutical drugs. I run up the stairs, two stairs at a time and people think at 65 you should be retired. And I'm thinking I am retired.

This is what I enjoy doing. That's the last thing. After nutrition, we talked about stress. We talked about exercise. We talked about sleep the most important thing, the last thing is purpose.

Find something you're willing to die for and live for it. To find something that you care so much about that you're willing to dedicate your life to doing.

Because people who live a life of purpose, people who serve others, those are the people who tend to live 10 to 15 years longer than the people who are simply trying to make money.

Always remember, if you can improve the lives of a billion people, you can create a $100 billion company. But you should never wake up in the morning and say, what should I do to create a $100 billion company?

Making money is a byproduct of doing things that improve people's life. It's that simple. I agree with you on Kazarian percent. Give me, give me, in our last few minutes, together explain the the role of environmental toxins and its impact on the gut microbiome.

Because in the five things you mentioned, again, because as you and I both know, the breadth of conversation goes, you know, whole, you know, holistic dentistry and the stuff that you guys are doing in your mouth, you got sunshine.

The importance of sunshine exposure, even with the highest levels of vitamin D, lowest risk of everything when they have that. But, you know, let's talk about these environmental toxins and what our impact is, you know, on our health.

So first of all, environment makes a tremendous impact. People who live, in fact, in, farms, they tend to get less sick than the people who live in the urban jungle.

Right. It's because you're constantly exposed to a lot of the cows, the cow dung, the horse shit and stuff. And you microbiome is causing you're inhaling a lot of this stuff and you're rich.

Even people who go hiking in nature, the microbiome is much richer.

Environmental Toxins and Closing Thoughts

Mycotoxins or any type of toxins, mold in the environment, absolute destructive to your gut microbiome. That absolutely destructive to your microbiome, your honor, the microbiome, the environment, toxins or even the other types of toxins that we get heavy metals that, you know, when we eat fresh and, and meat, you know, mercury and stuff, all of those heavy metals and especially mold infection is completely destructive to our body and our microbiome.

So we have to absolutely do that. The way we grow our food with pesticide, insecticides and all that stuff, or eating the canned food that has preservative, what is preserving against the bacteria?

What is that called antibiotics. Then you think that food you're inhaling that all the basically taking and digesting antibiotics is going to completely destroy your microbiome.

So stop eating ultra processed food. You stop eating foods that have preservatives, eat fresh whole foods. That's the you know, you need to. I will listen.

As Naveen Jain, the founder and CEO of Biome says on his website again, you can when it comes down to you can choose health or you can choose sickness, but the choice is yours.

I believe that your genetics are perfect people. It's all about, you know, you can you can say, well, what about family history? Family history is true when we eat, live and think like our family members did.

But don't blame the genetics. The genetic blame is just a simple way for the doctors to say, hey, there's nothing you can do. Take these pills. And as Naveen and I just talked about, there is everything that you can do.

So seems pretty simple to me right now. Naveen, as far as head over to biome.com and start there. That's a very aggressive price for all the information that they're going to get.

So that's an exciting, exciting entry point. For people that is really you guys made it affordable for just about everyone given the amount of information that they're going to get.

And, again, one of the most important in our health and in our, in our security and safety are the two most important things. And without those, you you truly have nothing.

So thank you again. I totally agree with you that when you are healthy, you have many wishes. When you're sick, you only have one wish. And when we are young, we sacrifice.

Fights are health for wealth and when we get old, we sacrifice our sacrifice, our wealth for health. So don't do that. That's a stupid thing to do. Yes. Those are those are wonderful, wonderful sayings.

All right, everyone, thank you so much for tuning into this episode of the Heart Attack and Stroke Prevention Summit. Doctor Jack Wolfson, we'll see you next time.