

How Your Biomes Drive Custom Food & Supplement Solutions – Naveen Jain – #1005

Dave Asprey:

You're listening to The Human Upgrade with Dave Asprey. This episode's recorded live at the Beverly Hilton, which is my all-time favorite hotel in LA where I hold the biohacking conference, and I'm here in town on business, which gave me a chance to hook up with my good friend Naveen Jain, who is CEO of Viome.

If you're new to the show, it's like, what is that? If you've listened to one or more of the thousand episodes, you've probably heard me talk about Viome and about Naveen. He is a mentor and advisor for me, and I'm an advisor for Viome and an investor in Viome. So, full disclosure, I have an interest, but it's not going to change my life if you do or don't get a Viome test.

It will probably change yours, though, which is one of the reasons we're talking. But Viome is one of the preeminent biohacking companies. The definition of biohacking, when I wrote it, is the art and science of changing the environment around you and inside of you so that you have full control of your own biology.

Well, we just didn't know how to measure the environment inside us, which is where Viome started and now it's getting into the environment around us, even, like what's coming in. So, Naveen, it's been, what, nine years or something since-

Naveen Jain:

I think it's more like seven, but who's counting?

Dave Asprey:

So, it's been seven years. The before time is always kind of muddled up in me. I'm all about the future, so are you, but you're better at counting the past than I am, apparently. So, you started seven years ago, and you came to the Biohacking Conference.

Naveen Jain:

No, no, no. That's not how it all happened. You know that, right?

Dave Asprey:

Oh, I think I was there for part of it. What are you talking about?

Naveen Jain:

I think we started, I think you came to our offices when we were just three people, seven years ago, and you sat down and you had your recording stuff and we started talking, right? And we started recording. But I think, if my memory serves me right, we actually met at XPRIZE where you had this electrical stimulation.

I was up on my abs and on my arm and you were doing ... And you couldn't even move, as if I was trying to move five pounds and I was lifting 50 pounds.

Dave Asprey:

That was the most fun. This was at Peter Diamandis' ... It was a 10th anniversary for the ... I'm sorry, XPRIZE. And so, there were a lot of big donors in the room, and I brought my weird Russian, it looks like an IED.

Naveen Jain:

Oh, god.

Dave Asprey:

And I'm hooking it up to people's arms and it makes your muscles get fat, really big. See, we did your abs. You're sweating and we were all having such a great time. I have no idea how many people I electrocuted, in a good way. And then, after that, I said, "Let's do a podcast." I came to your offices. Frankly, it was kind of an unimpressive office.

Naveen Jain:

It was, but, well, obviously now you know how things have changed.

Dave Asprey:

I know how things have changed a lot. And I came in and shocked you again and we had the podcast, and you came to the conference and within a couple of years, though, you're saying, hey, guys, here's 10,000 species of bacteria that actually live in the human gut that no one knew about. You added it to the global database of stuff.

Naveen Jain:

Yeah, we sure did. We sure did.

Dave Asprey:

That might have a medical difference for some people. What do you think?

Naveen Jain:

Well, first of all, you and I both know what happens in the gut, unfortunately doesn't stay in the gut.

Dave Asprey:

I know, right?

Naveen Jain:

And if you look at the research now, you can literally look for any disease, whether it's a cancer and microbiome, or Alzheimer's and microbiome. Parkinson's starts in the gut 15 years before you see the first symptom. Diabetes, depression, you name the disease, including the therapies for cancer.

So, whether your immunotherapy works or does not work depends on your gut microbiome. So, literally, our gut microbiome is a foundation to human health.

Dave Asprey:

The more work I've been doing in neuroscience and in all of the other fields of biohacking, it's become abundantly clear that we all have lenses on reality. So, we have the emotional and psychological lens, you might see the person as a threat. I might see them as a friend or all that sort of cognitive bias.

But it turns out your meat, your body has its own lens on reality. So, it filters out some things, it ignores some things, it accepts other things. And one of the major things that controls that lens on which particles get into the body is the bacteria in the gut. So, if you have the right bacteria or you just have a certain set of them, the body will detect that cancer drug, or it'll detect that food you ate.

It'll modify it and create some sort of signaling thing. And if we can change the bacteria in our gut, it changes the way our bodies interface with reality.

Naveen Jain:

Partly. So, it's not just changing the bacteria, it's about their functions. It's-

Dave Asprey:

What they do, not which ones there are.

Naveen Jain:

Exactly. The same organism in one environment can actually produce something good and the same organism in a completely different environment can produce something toxic just like a human being. You take a person, put them in a good environment, a good behavior, you put them in a bad environment, a bad behavior.

So, it is really the behavior and the functions that matter because our immune system and our body doesn't have eyes. It doesn't say, here come in, I see you there. It simply says, are you producing butyrate or are you producing toxin? And that's what it reacts to.

Dave Asprey:

So, we're basically reacting to bacteria poop all the time.

Naveen Jain:

That's basically what it is. We literally live and interact with the micro poop, right?

Dave Asprey:

I should write marketing copy for you.

Naveen Jain:

But it's called metabolites, right? In technical word is metabolites, but that's what they are.

Dave Asprey:

It's probably more savory, but yeah, it is metabolic poop. And that's okay if you really think about it too, what is soil? Earthworm poop, that's what plants are based on. So, it's the cycle of life. And what you're saying is let's modify via what we eat or potentially what medications or supplements we take, what metabolites are created. And those metabolites, in my language, those are signaling molecules that tell the body what to do, and then the body will listen.

Naveen Jain:

Exactly. And I think some of the metabolites, in fact, some of the RNA may just directly signal, or these metabolites may actually bind to certain receptor like TLR4. So, your whole immune system in our microbiome is constantly interacting with each other, so much so that 70% of our immune system is along our gut lining.

So literally our immune system and our gut microbes are interacting. In fact, as we start to talk, you will see, well, that is what ends up. The beginning is actually somewhere else, which is on the top of the tube. And also, there is an oral microbiome, and that's actually more diverse than the gut microbiome. Even the quantity is about one or 2%.

So, there's a tremendous density of microbiome in your gut, but in terms of diversity, there is more diversity in your oral microbiome than your gut microbiome.

Dave Asprey:

So, did Viome get it asked backwards here? You started out measuring poop and then you went into poop and saliva and a tiny little drop of blood, which is the whole full body intelligence test with mitochondrial function aging, that's ridiculously low cost compared to anything else out there. But you started out with poop and now you're all about where it comes in instead of where it comes out. What caused you to shift?

Naveen Jain:

Well, look at the evolution of what we did. When we started, look at all the human genes that are expressed in the human body. And obviously there are certain genes we get from mom and dad, and the rest is all microbes. 150 to one. That means more than 99% of all the genes that are expressed in our body don't come from our own mom and dad. They come from actually these microbes that we acquire after we are born. And the first exposure is when the baby is going through the birth canal.

Dave Asprey:

If it even does, which so few kids do these days.

Naveen Jain:

Well, and that's a different problem altogether. We are going to get to it later. But the point is we thought that since majority of the microbiome, almost 95% plus of all the microbiomes in the gut, we should start to understand because that's a dark matter, right? And you say, what if we can crack that dark matter, understand what is going on there?

And we did that. So, once we start to crack the dark matter, it's starting to understand, by the way, we are the only company to date, even though we started seven years ago and we told everyone that DNA doesn't matter, your microbes don't matter. What matters is what they are doing.

And a lot of people just had such a difficult time understanding when you say your genes are not your destiny. And to some extent I know there are a lot of people would talk about that, yes. But to a large extent, your genes tell you what you have propensity to happen.

But identical DNA makes our hair, our skin, our eyes, our nails literally start with the same DNA in one single cell, zygote. And then same thing can make your hair, your skin, your eyes, your nose and fingers. And so why is it I don't have the eyes growing on my fingers and the nails growing on my head? Same DNA.

Simply, certain genes are over expressed, certain genes are under expressed, they make your hair, your skin. So literally same DNA can write anything it wants to write. So, DNA is like an alphabet and RNA is the script that you are writing.

Now, the things that really surprised me, at least when it came down to the human genes work, people will say, well based on your gene mutation, you're more likely to get Alzheimer's. And it always troubled me to understand how is it even possible that I am born with that gene, right? So, everyone believes that APOE4 or multiple copies of APOE4 is associated with having Alzheimer's.

And I'm thinking, I'm born with that. So does that gene sits in my body for 50, 60, 70 years and one day it wakes up and saying, holy cow, I forgot to wipe out his memory. I need to do something. It can't possibly happen. Something has to trigger it. Something has to make it change its expression, under expression, over expression. And that's what causes you to have Alzheimer's.

But if you can take the trigger away, then does it really matter what genes you have? And now, by the way, last week, research was published that actually shows what the trigger is. So, it turns out it's called C pneumonia. So, it's chlamydia pneumonia, it actually bound to the E4 allele on APOE, and it does not bind to any other mutation. And that literally is now they're showing is the cause, especially-

Dave Asprey:

As the cause of Alzheimer's or it causing Alzheimer's?

Naveen Jain:

Cause of Alzheimer's, at least a cause. And what they did was they actually knocked off the E4 in mice and these people did not develop Alzheimer's.

Dave Asprey:

Wow. And let me define some things about the audience. So, there's APO3, APO4, right? And you have a mix of things. You have two fours, a three and a four or two threes. People with two threes seem to be able to swim in mercury and they're fine. People with two fours seem to get heart disease and Alzheimer's a lot. So, you can see this. But those are genes, Naveen, those are not metabolites. What are we talking about?

Naveen Jain:

But that's why I see it. But ultimately their expression changes because of some other external environment.

Dave Asprey:

The switch.

Naveen Jain:

Switch. So, what happens is, let's assume you had two copies of E4, and you did not have C pneumonia, then it doesn't matter. You can have three copies of E4, and it still would not cause Alzheimer's. And that's the trigger. And by the way, elephants have four copies of APOE4, and what are elephants known for? Their memory.

Dave Asprey:

That's interesting.

Naveen Jain:

So, the point I'm trying to make is that in fact they did the studies on some of the Amazonian tribes, they have eight copies of E4, APOE4. And they never develop Alzheimer's because APOE4 protects them from bacterial infection.

Dave Asprey:

It's very interesting how bacteria and viral exposure has changed the human genome as some people died, and other people didn't. So, I think my genetics, I've got MTHFR, and I have rapid clotting. I have the perfect genetics to be someone who would go from village to village in Northern Europe and take an arrow in the back, not bleed to death, not get sick when I ate the food from the stolen village and go to the next one.

But that means now that when I'm swimming in toxins and all, having thick blood isn't a good thing, so I manage those. But my genetics look like that because of natural selection, which was influenced by bacteria.

Naveen Jain:

But I still haven't completed my evolution story. So, we started out understanding what's happening in your gut. And as we start to analyze a hundred thousand people, we're starting to say, wow, we now understand all these metabolites that are being produced in the gut. And we know when they're producing a lot of the stuff that are anti-inflammatory, such as short chain fatty acid like butyrate and stuff, that was really good.

And when the microbes were producing things like LPS or ammonia or sulfide, it was no good. And now we are saying, wow, we can actually adjust the food that you take. So, if you have a lot of sulfite production, we can say don't eat broccoli or Brussel sprouts because they all contain the stuff that's going to convert into sulfite.

Dave Asprey:

Too much sulfur, right?

Naveen Jain:

Too much sulfur. And now you can look at the stuff and say, if your oxalate metabolism is not good, then you shouldn't eat things like spinach, very high in oxalate?

Dave Asprey:

Maybe you shouldn't eat spinach anyway.

Naveen Jain:

For that matter. But Popeye actually sees something different. Popeye taught; spinach is healthy for everyone.

Dave Asprey:

If you zoom in on the can, on the cartoon it actually says testosterone right there. He was shooting up testosterone, not spinach.

Naveen Jain:

The point is that Popeye was no scientist. And that's a fundamental problem. We realize there's no such thing as universal healthy food. Fundamental problem, we realize there's no such thing as universal healthy food.

Dave Asprey:

Amen, right?

Naveen Jain:

And that people don't realize is food that's healthy for someone else may not be healthy for you. And even the foods that's healthy for you today may not be healthy for you a year from now because your body is constantly changing. So, as we were learning about the gut microbiome, we could adjust the food and we thought, wow, that's good.

But what we were missing was we didn't understand how it was impacting the human gene expression. So, we said, wow, we need to be able to analyze both of them together. So, we say, what if we can get a finger prick blood and analyze all the human gene expression, including your mitochondria? And most people may or may not realize the mitochondria had its own set of DNA, which are different from the ones that are a human DNA, right?

Dave Asprey:

In fact, this is so important. Very little research has been done on this compared to the human genome, probably like 5% on the mitochondrial genome. It's becoming more popular now. In my view of reality, the mitochondrial are ancient bacteria embedded in our cells, they're environmental sensors, and they can make metabolites of their own, which control most of our system.

Naveen Jain:

ATP especially.

Dave Asprey:

Yeah, ATP, which is energy. They can make sex hormones, they can make melatonin, they can make serotonin, they can make inflammatory things, they can make proteins. So, they're largely in charge of what we do and how we feel. Well look at human cells.

Naveen Jain:

They are a bunch of organelles inside the human cells, cytoplasm, ultimately these are all co-evolved together. So, these are ancient organisms captured inside the human cell. So now if you think about really who we are, we are really to all sense, I would argue at least being generous, we co-evolved or one could argue they really are using us as a container, but that's okay.

Dave Asprey:

We're puppets. We're walking Petri dishes for our bacteria and they're running a lot of stuff and they just let us think we're in charge much of the time, but not always. That that's my view. But that's why your mitochondrial expression is really important.

And for listeners, you can look at what genes someone has, but you're not looking at that. You're looking at the expression. Walk people through the difference between looking at a gene versus looking at expression of a gene.

Naveen Jain:

So, think about it, as I mentioned, that same gene can make your hair or your teeth or your eyes. What it's making is what really matters. What are they producing and what they're expressing?

Dave Asprey:

How do you measure that? What is a gene expression? What is that measured in?

Naveen Jain:

It's like RNA and specifically we are looking at both mRNA, that four letter or word that we really got used to during the last couple of years and the non-coding RNA, because we know just because it's not a messenger RNA doesn't mean it's not being impacted by the non-coding RNA that's actually sending the control signals. So, we look at both of them. So, we look at non-coding RNA and the RNA of every sample.

Dave Asprey:

So, we got really technical there. I'm going to translate RNA for listeners because this gets relatively complex. I don't want your eyes to glaze over here. This isn't that hard. RNA reads DNA. So, DNA, if you imagine this arm is DNA, it's got a bunch of helical stuff and then RNA comes along and it reads this, it actually-

Naveen Jain:

Well, it's a code on.

Dave Asprey:

Fair point, I'm going to take a little bit of poetic license here. So, it reads the DNA and then decides what to do with it.

Naveen Jain:

And it decides based on some of the thing called epigenetics. A lot of people probably know around methylation or acetylation. So, things like these, when their genes are methylated, that means there are methyl on top of your gene, its expression is under express or actually could be prohibited from expressing.

When it is actually acetylation, then it's over expressed. So, when you are reading the gene, the gene doesn't change over time, but it's actually the epigenetics is always changing and that's why the RNA is always changing, and the DNA is not.

Dave Asprey:

So, epigenetics is a foundational biohacking technology. In fact, biohacking itself, how art and science of changing the environment around you so you have control of your biology, that's epigenetics just to be ... I made epigenetics cool. And the words that we talked about there, adding acetylation, acidic, oh that's vinegar.

So, this is a core thing that our body does, or we talked about adding methyl groups, another core thing and you get those from certain foods or from certain supplements. And I'm actually an under methylator, so I have to take methyl groups, or my body doesn't work very well.

Thankfully, I know that from gene ... Actually those, I know that from genetic tests though, not gene expression tests. So, there's some value in gene testing.

Naveen Jain:

Well as I say, you could have learned that from actually gene expression. We could have told you the genes that actually over expressed right now and you need to express them, and you need some methylation there.

Dave Asprey:

So, you would actually, and this is something that you actually do tell in the [inaudible 00:20:37].

Naveen Jain:

So, this actually what happens is when you look at the full body intelligence here, it actually the third part that we haven't gotten to it. So, as we were starting to understand the gut, we see now, let's understand interaction with the human host.

Dave Asprey:

That's where it gets really interesting.

Naveen Jain:

So, we said, okay, so now we going to do a fingerprint blood because that allows us to see what microbes are producing, how are they changing our cytokines, our immune system. So, is the IL1 up, is the IL8 up? Is IL16 up or is IL18 up?

So, we are now looking at all of that. We are looking at all of the mitochondrial gene expression. And then we say, oh wow, we are able to see how these things are interacting.

Dave Asprey:

So, you started with poop, which gave you the here's the bacteria and what they're actually doing. And then when you started getting blood, you're saying, oh look, that's funny. When the poop looks like this, the blood looks like this. And pretty soon you can predict the blood from the poop or predict the poop from the blood.

This is why big data and biohacking are so interesting because right now what you're doing is you're going through all of recorded history, every ayurvedic thing, every traditional Chinese medicine, every diet from around the world that your grandmother told you to eat, and you're saying that works or it doesn't work for you. And we can throw away the stuff that's fake and we can do more of what's real. And big food is screwed because if their stuff doesn't work, we're going to know.

Naveen Jain:

And by the way, it's very interesting, anytime you are buying anything that's not designed for you, there's a good chance it is actually harming you. Isn't that a surprise?

Dave Asprey:

Could it be that some foods are not compatible with your biology and they're compatible with mine and vice versa? Of course, they could be, right? But this is why you go to a restaurant 20 years ago and the chef is all offended that you don't want to eat it. You're like, that's because what tastes good. It's not compatible.

And so especially for those people like me who are probably on the far spectrum of what's-

Naveen Jain:

But you and I had dinner yesterday and we have the good example of what you ate.

Dave Asprey:

I could have literally given you all the stuff I didn't want, and I could have taken all the stuff you didn't want. That's why we're friends, I think.

Naveen Jain:

That's literally what happened is that you could eat this stuff that I wanted, and I could eat the stuff that you did want.

Dave Asprey:

You're like swimming and hummus and stuff. I'm like, how do you do this man?

Naveen Jain:

And I was like, I wanted the little hot spicy stuff, and you say, take that stuff off my stuff.

Dave Asprey:

So, let's fast forward to the future a bit.

Naveen Jain:

Okay, so I'm going to come there. So now we say, all right, that's good. But I remembered that my mom will always tell me, eat slowly and chew your food. And I kept wondering why is mom tells me, is she worried that I'm going to somehow choke because the food is so big? Well, it turns out there is oral microbiome and I'm saying it's so diverse.

When you eat your food slowly and chew your saliva, which is oral microbiome in the saliva, it's predigesting your food and sending the signal to the body about what is coming. So, it predigests the food. So, it starts, the nutrients can get absorbed. If you don't predigest the food, the nutrition in that food cannot be absorbed in our small intestine.

So, the idea was how do we go make the food predigestible? And when you taste something sweet, it sends a signal to pancreas, hey, the sweetest stuff is coming, start pumping the insulin. And that's why when people take artificial sweetener, what happens is your saliva on oral microbiome are sending the signal to pancreas to go pump the insulin. And guess what?

Insulin has nothing to do because there is no glucose to digest. Now suddenly you have a whole bunch of insulin in the body and now you get insulin resistance, you become diabetic, you have metabolic diseases because you thought you were taking this artificial sweetener that was good for you.

Dave Asprey:

And it also, when the insulin comes out, it drops your blood sugar, which gives you sugar cravings, which makes you drink another diet soda. It's the perfect business model, artificial sweeteners.

Naveen Jain:

But it sucks for you as human beings.

Dave Asprey:

Well, I know, but it's a business model. I'm being a little sarcastic there, but this is a prime example of the beauty of systems biology versus saying, well, calories in, calories out.

Naveen Jain:

That work that way.

Dave Asprey:

Does your biome and all the 200 plus thousand tests that you've seen, no, 400000-

Naveen Jain:

425000 to be precise, but who's counting?

Dave Asprey:

It's a little bit of data. I hope you're counting. I mean, I'm an investor, right? So that 425,000 data points, can you then say-

Naveen Jain:

No, not data points. Actually, this is 425000 samples.

Dave Asprey:

And each of those has god knows how many data points.

Naveen Jain:

600 trillion to be precise.

Dave Asprey:

600 trillion data points.

Naveen Jain:

600 trillion RNA nucleotides.

Dave Asprey:

Is that it?

Naveen Jain:

Yeah. By the way, that is the world's largest database of any company. That's about 50 times higher than companies like 23andMe.

Dave Asprey:

Wow. How does it compare to any of the credit reporting agencies?

Naveen Jain:

I mean really nothing. I mean that data is so small but coming back to it. So, as we start to look at now, at the same time your saliva and your gut and blood all together, which is what became full body intelligence-

Dave Asprey:

Which is, by the way, how much does full body intelligence cost?

Naveen Jain:

For less than \$300?

Dave Asprey:

You keep dropping the price. It's 299?

Naveen Jain:

299. So interestingly, now looking at all three, what can we do? We can give you obviously your biological age. And by the way, that's the best biological age tool out there.

Dave Asprey:

Compared to True Age even. The DNA methylation tests.

Naveen Jain:

Think about it. DNA methylation only is one that's looking at the blood. We look at the blood, your saliva and stool all together to actually calculate your biological age. And now we give you your cardiac health, your cognitive health, your immune health, your gut health, oral health, and then you say, well that's good.

Give me more details. So, we give you literally all your functional good, your digestive efficiency, your dental health, your gum health, your bad breath health and on and on. And we said, no, no, no, that's not good enough. Talk dirty to me.

Great, we'll talk dirty to you. Here's your nutrition production, here's your flag assembly score. Here is your LPS score, here's your butyrate score, here's your GABA score, here's your serotonin score, and we give you as much detail as you want. But more importantly, after all this, we tell you exactly, here are the foods you should not eat and here is why.

Eat these foods now. And here is why. Don't take these supplements that may actually harm you. So, for example, if you have very high uric acid, you should be taking vitamin B3 or niacin. Similarly, if you have

very high bile acid production, you shouldn't take turmeric or curcumin. Similarly, this is what's going to offend a lot of people, they think I want to live long and I'm taking NAD or NR.

If you have high cellular senescence or if you have high inflammation, you shouldn't be taking NAD because it's going to increase more reactive ROS and it's going to increase more inflammation.

Dave Asprey:

I want to see some more data on that.

Naveen Jain:

We have quite a bit of data. In fact, by the way, NR and NAD, I think last month, I think I might have even sent you the research, it actually helps progression of cancer and how the cancer metastasizes.

Dave Asprey:

Oh yeah, I did a bunch of research on that. Chris Masterjohn I think had the most nuanced read on it. It looks like NAD and NR, and NNN, they're cancer preventive until you get cancer and then they're cancer promoting.

Naveen Jain:

And so that's my point is, so taking NAD just because you think you going to live longer may be exactly the thing that may shorten your life.

Dave Asprey:

Only if you already have cancer

Naveen Jain:

Or you could be developing a cancer, right? So, the point we want to make is that no such thing as you know, were the healthy thing without knowing what else is going on. So now remember, if we could look at your biomarkers and what if we can say, hey, you don't have any signs of cancer, you can take an NAD, your inflammation is low or your cellular senescence is low, you can take this, right?

So literally, we custom tell you for each individual by looking at everything, what ingredients you need, how much of vitamins you need, minerals, herbs, digestive enzyme, peptides, amino acids, probiotics, prebiotics, whether it's your lycopene, whether it's your amylase, we tell you, you need one.

And we go a step further. We have built a robotic machine that literally every single month makes those capsules just for you. There is no premier capsule. This is not like a pill path. Take one capsule from the red draw, one from a pink draw and put them in together.

Dave Asprey:

This is really impressive because going back 25 years, when I started taking a lot of supplements to rewire myself, I actually made this wooden machine. I just threw it out when I was moving. I probably should have sold it on eBay, but it was for counting capsules to get the right capsules in the right order and all, just so I could have a custom bag of vitamins.

And there's companies that do that. But what you did, and you reached out and I vetted every single ingredient supplier. This is all super top tier stuff, and you are not making, oh, there's six varieties, I'm

going to put you in a bucket. No, this is literally on a per milligram basis of each one for that person based on their gut.

And you're doing individual ones. So, all eight of the pills in a little Viome packet, all eight of them are just for me. And so, this is the world's most precise and complete [inaudible 00:30:16].

Naveen Jain:

And here is a thing, surprise. All eight are the same. So, what we do is we literally have an assembly. It says go to, this is for Dave Asprey, go to bin number three, take 22 milligrams, go to bin number seven, take 18 milligrams, go to bin number 22, get 80 milligram and makes the powder, ultrasonically, shakes it up, goes to the encapsulation, puts the powder in all eight capsules, and then it goes to a sachet machine to put them in a sachet, puts the date you make it.

So literally, see this is the date we made it for you. And every month it's made. So, you can see every single month when it is made and every ingredient by the way, if you do a retest, it completely changes. And now we are going even further. We're saying, hey, we are looking at your Apple Health data and we see you were not sleeping well last month. So, guess what?

We are going to increase the amount of magnesium we give you so that you can sleep better. Or we notice that you were walking a lot and exercising a lot. We are going to increase a bit of calcium for you. We're going to increase a bit of these ingredients for you.

Dave Asprey:

That sounds like it would be insanely expensive. What is a monthly subscription?

Naveen Jain:

It's very interesting. People have this idea that if it is custom made for you, it has to be expensive. The robots don't care if they make the same thing a million times, or they make the million things different times. So, once you build this automated system, it's the same cost. I can make the same thing a hundred times, or I can make different things every time.

It doesn't care. And our cost, we give it to a customer, everything, like for me, it's about 55 ingredients of vitamin, minerals, herbs, digestive enzyme, amino acid peptides, every probiotic, prebiotic, \$5 a day, under \$5 a day. My latte cost \$8 now.

Dave Asprey:

Oh yeah. Most people who take a meaningful number, sometimes I was spending five bucks a day on them, I'm probably spending, I probably spend 50 bucks a day. I have no idea why.

Naveen Jain:

And by the way, just the prebiotics alone is 30 bucks. Just the probiotics is 50 bucks.

Dave Asprey:

That's the problem. I am going to argue, eight capsules isn't enough to fit some molecules.

Naveen Jain:

But it's not eight, plus this, right?

Dave Asprey:

This is the second part. All right, so you've got to get some prebiotics and probiotics. So, this is actually really a powerful thing. So, you've got the prebiotics, these can't go in hot water. I can't put these in my coffee.

Naveen Jain:

That's correct. Because they kill the probiotics.

Dave Asprey:

I know. You need to get tougher probiotics.

Naveen Jain:

They call them post-biotics. And we do use them.

Dave Asprey:

You do, right? So, you open one of these up, you put it in water once a day, you drink it.

Naveen Jain:

But I put in my oatmeal, by the way.

Dave Asprey:

Why would you eat oatmeal?

Naveen Jain:

Oh, what?

Dave Asprey:

Because you hate your blood sugar levels or you hate your gut?

Naveen Jain:

I hate my gut actually because oatmeal is really good for me.

Dave Asprey:

No, it's not.

Naveen Jain:

It used to be really bad for me. Your gut has copper, it all kinds of-

Dave Asprey:

What about your continuous glucose monitor? Do you do that?

Naveen Jain:

Oh, I've been better than that. Oh, I forgot to tell you that. We actually built in the continuous glucose monitoring based on what's happening with your microbes.

Dave Asprey:

Well, it's not continuous.

Naveen Jain:

Oh. So, here's what we did. We actually built the AI model of; in fact, we started out with can we look at what microbes are producing? And then we put on 1100 people for two weeks and we fed them 70000 different foods. So, we can build the AI model-

Dave Asprey:

While you are monitoring the blood sugar?

Naveen Jain:

While we're monitoring the blood sugar. So, we build the AI model for every single food, what microbes would do and that would cause you glucose's response in a CGM. And then we build the AI model for that. And then we verify with 89% accuracy, that's literally the theoretical limit.

Dave Asprey:

So, if I send in my full body intelligence test, which is 300 bucks, you're going to look at my poop, my saliva, my blood. And based on that you can predict with 90% accuracy whether oatmeal's going to spike my blood sugar or not?

Naveen Jain:

That's right.

Dave Asprey:

That's legit.

Naveen Jain:

And now we are doing it just with saliva alone.

Dave Asprey:

So just from basically spitting in a tube, so then you could tell me ... I've seen a lot of CGM data from oatmeal. The vast majority of people get a huge post prandial spike. Are you looking at the post prandial or just average?

Naveen Jain:

Postprandial. So interesting thing is very different. We saw people whose blood glucose went up with almonds and most people would say, almonds have no glucose response.

Dave Asprey:

No, they do have some for-

Naveen Jain:

But some people's spikes really low. What we saw was some people's spike with bread, some people spike with banana. So, we literally are able to predict that you can have banana but don't eat bread or you can have bread but don't eat banana.

Dave Asprey:

So, my peanut butter and banana sandwich is probably not going to work. Just go all three?

Naveen Jain:

It just might work, actually.

Dave Asprey:

Not for me. It'd punch me in the face and the kidney all at the same time. So, this is fascinating stuff. Do you find that there are times when it just doesn't work for a certain ... there's 11% of people where oh we would predict that-

Naveen Jain:

But 11% is not because it doesn't work for 11% of the people. What happens is that even for the same person, if you predict continuous glucose monitor, there is a variant in the body. So, in a sense that 11% the thing that it's just natural for the body to actually change. So, if you eat the same food and you do it 10 times, you're going to have that difference.

Dave Asprey:

How tired? Did you go for a walk? Did you do squats?

Naveen Jain:

How you slept and what did you eat the night before? And a whole bunch of things. So, my point is that variability is what I call the body's variability. You just can't take it away. So, it's not 11% of the people, it doesn't work. That 11% variability just exist-

Dave Asprey:

11% of the time. If I was to do the precision probiotics that include prebiotics based on my own stuff, is it going to change my glucose response to foods?

Naveen Jain:

Absolutely. That is the whole idea is that can we adjust your gut? So, to be able to, in fact the foods that were causing high glyceic response theoretically should be able to now not do that, right? So over time, as your gut environment changes, the foods that were high glyceic response may not spike as much.

Dave Asprey:

That is awesome. And people who want to, I mean you can get the little continuous glucose monitors. I'm also an advisor levels, I don't know if you've worked with levels directly.

Naveen Jain:

So, we do. And the point of the thing is, that's good for one time.

Dave Asprey:

Two weeks.

Naveen Jain:

Two weeks. And then what? So, my point that as a business in some sense then what? Now you know, but until you constantly understand, hey, now six months later I tried again, and it changed. What did I do?

Dave Asprey:

I find that there's a lot of value if I wear it at least half the time because then it reminds me, oh, I really didn't sleep well last night. It doesn't matter what I eat. My blood glucose doesn't go very well. Or look, I did everything, and I ate a piece of pie.

Naveen Jain:

But you are analyzing everything.

Dave Asprey:

Yeah. I'm curious, I'm a nerd.

Naveen Jain:

But most people would not. And they will not know what to do. And the thing about what we are doing is to tell you what to do.

Dave Asprey:

It's totally true. So, I think this is foundational. What I like to do is I do take my Viome supplements and then I take a whole bunch of other stuff, some, a lot of which I've designed that's designed to take me far beyond healthy. Because I'm actually not interested in being healthy. I'm reasonably healthy.

I was very unhealthy when I had chronic fatigue syndrome, I was sick on, I weighed 300 pounds. I would've given everything in my life to be healthy.

Naveen Jain:

Isn't that amazing that when you are sick you only have one wish. And when you are healthy, you have 10000 wishes. Who would've taught to become a superhuman when you are sick, all you care about is just to become human.

Dave Asprey:

Exactly. That was my mindset. You just nailed it. And so, what I'm into now is, I of course want my baseline supplements and getting custom precision made ones that are going to fill in the right amounts. And then I don't mind saying, I want to push on this pathway. I want to see how good my eyes can be and then I'll focus on my vision.

Naveen Jain:

I love that idea by the way, you and I had dinner last night and we talked about this, what if we can actually create these power ups?

Dave Asprey:

I want to help you do that.

Naveen Jain:

I love that idea that you get to essentially make someone healthy. This is what you need to be healthy. But now you want to say, look, I just don't want to be an average cognitive function guy. I want to boost my cognitive to be having unfair advantage.

Dave Asprey:

So, I love it. Going back to an old product name. That was slick.

Naveen Jain:

No, but seriously, I want to create something that says you want to be beyond healthy to have an unfair advantage with these power ups, right? So cognitive power ups, metabolic power ups, right?

Dave Asprey:

It's like playing a video game in life. It really is. It's funny, I mean you're an engineer, I'm an engineer by training, that computer science and engineering stuff, you can break all problems down including fixing your biology, including upgrading your biology.

And it was just taking that stuff to saying, how do I get my brain back? How do I not be 300 pounds? And what we're fighting in engineering in all businesses, when you have more data, you can suddenly invent a new airplane wing surface that no one thought of because we had the data, and we could get it. And what I'm-

Naveen Jain:

I'm asking a different question.

Dave Asprey:

Ah, what's the question?

Naveen Jain:

So, the thing is, it is half the time the questions you ask is the problem you solve. So what questions are you asking? You have all this data, but what questions are you asking that determines the solutions you are going to get? So how do you learn to ask the right questions?

Dave Asprey:

That's an art.

Naveen Jain:

Right. So, I can give you an example. When we were doing the moon company and people will say, hey, even if you are on the moon, how are you going to grow the food on the moon? If you ask that question, the only solution is to find a way to grow the food. What if you ask a slightly different question that says, why do we eat food, right? You say, oh we need nutrition, and we need energy. What are the different ways you can get energy?

Dave Asprey:

There's lots of them.

Naveen Jain:

And what are the different ways we can get nutrition? And now you have opened up hundred solutions rather than simply growing the food, right? Same things happen in the healthcare company. When I started Viome. See, we didn't say, hey here is we want people to stay healthy, understand what is going on in their body.

We challenge when everyone says all about your DNA, say, what if that is not true? What if it's actually what they're doing? When everyone say microbiome is important, we say everyone is focusing on trying to find out what organisms are there. What if actually it's not the problem because 10000 different organisms can produce exactly the same thing that's making you sick.

Dave Asprey:

It goes back to that, what's your lens on reality that we talked about at the beginning of the show.

Naveen Jain:

That's actually called asking the right question.

Dave Asprey:

I remember at one of Peter Diamandis' events where you were, the CEO of SpaceX was talking and I said, "Well, you guys harden spacecraft so that they don't get damaged by radiation and you're trying to build these crafts to go to Mars. What have you done to harden astronauts?"

And she looked at me and she said, "Huh, no one's ever asked that question in 17 years. We've got to think about that." And honestly, probably having the astronauts spit in a tube and do Viome and then changing the gut bacteria so they work better in space is a big thing.

Naveen Jain:

There are organisms that grow in radioactive nuclear waste. What does that mean? These microbes have actually figured out how to protect their DNA against the radiation and use radiation as a source of energy. Now if you take the genetic material from them, use CRISPR to modify yourself-

Dave Asprey:

Your mitochondria could be radioactive mitochondria.

Naveen Jain:

And you could actually be completely radiation registered.

Dave Asprey:

Can we be the first two guys to do that?

Naveen Jain:

There you go.

Dave Asprey:

All right, I'm down.

Naveen Jain:

The point I'm trying to make is that every single time just asking a different question allows you to look at the problem differently.

Dave Asprey:

You are one of the few gifted humans who just knows that. You have a child's curiosity about everything. I know you really well and you have that about everything. It's not just about Viome or that, you just see all these questions and it's what engineers do when they maintain curiosity.

And one of the things that your lens got you to is, well, what are the correlations from all this data? And now with oral health, you've got a lot of stuff that's brand new. That's actually why I wanted to interview you, although we always talk about cool stuff, is that last time we talked, you talked about, oh yeah, we could spot a bunch of cancers. Was it four of the top five cancers?

Naveen Jain:

So, we actually were able just with a spit on a saliva, we can detect very early stage, the stage one is stage zero cancer in your mouth and throat with 95% specificity and 90% plus sensitivity. Never been done. FDA gave us a breakthrough device designation. And by the way, today you can go to a website, simply spit in a tube and we can tell you if you have any sign of cancer, biomarkers for cancer.

Dave Asprey:

That is groundbreaking and amazing. You've got something new though, because it turns out that everyone in the microbiome space, including me, I've been saying, guys, you have a fungal microbiome, you have bacterial and phages, all this stuff, but we're all looking at sort of the smoke that comes out of the fire, that's poop.

And what you're now gathering data on, and you've got enough data to actually make conclusions to say, well maybe it matters what kind of wood you're putting in the fire and maybe the fireplace needs to be built right. And that's mostly in the mouth, right? So, what did you learn about the mouth and gut bacteria and metabolic functions?

Naveen Jain:

So, first of all, I think you made such an interesting point. When we analyze gut microbiome or oral microbiome, we are not looking at just bacteria. We are looking at every bacterial functions, viral, RNA viruses, fungi and everything, including all phages, right?

Most people may not know the phages are essentially the viruses that infect bacteria, and it changes the bacterial functions. So, we look at all of those things. Again, we don't look at who they are. We look at in addition to who they are, what functions are they performing, right?

Dave Asprey:

It's all about what your behavior is, not what your intention is.

Naveen Jain:

That's right.

Dave Asprey:

I meant to do the right thing, but I killed everyone. Sorry. You're still a bad actor.

Naveen Jain:

Yes. That's what I think Gandhi said. Punish the sin, not the sinner.

Dave Asprey:

Well said.

Naveen Jain:

So, every meal we see here are the foods today are bad for you based on your analysis. Six months from now when you do the retest, those foods that were good for you may not be good for you anymore.

Dave Asprey:

So, I actually do that. Every time I eat, my lens is, is that food compatible with me? What are the pros and what are the cons? Do the pros outweigh the cons for my state now? It took me a while to learn all the science behind that.

Naveen Jain:

That's my point.

Dave Asprey:

And that's what you're helping people do with the Viome test.

Naveen Jain:

Oral health test.

Dave Asprey:

This is just oral health. [inaudible 00:47:28] oral health when you do that.

Naveen Jain:

You do that. But we are taking it out because we thought this is \$300. What if we can get 70% of the information just with saliva alone? Non-intrusive, right? You don't have a finger picker blood, easy to

spit. And we are able to, first of all we did was can we actually even detect your glycemic response just with saliva? So, here's what we did.

We had 50000 people who have done blood, saliva and a stool. So, first thing we did was we say, can we build the model that we see in the gut to blood sugar? And now can we do between saliva and gut? So, we can now actually get and enhance the gut to the ... Sorry, saliva to the blood sugar. And we did that.

Dave Asprey:

That's amazing.

Naveen Jain:

Now we are able to look at gum inflammation, your uric acid production in your oral microbiome, your sulfate production in your gut microbiome. Your bio acid production in your gut microbiome, right?

Dave Asprey:

All from saliva?

Naveen Jain:

All from saliva.

Dave Asprey:

That's insane, Naveen.

Naveen Jain:

And now once you do that, we are able to tell you your dental health is score, gum health score. And by the way, bad breath is not vanity. It's a sign of high polyene, high sulfite that causes inflammation. So, we are doing now, not only tell you what's happening, we are going to have a personalized oral gel, a personalized toothpaste that's designed for you that will not only remove plaque, remove the gum bleeding, periodontitis, and hopefully help you actually with the best oral health.

Dave Asprey:

So, I'm going to spit in a tube and then you're going to ship me toothpaste designed for my oral microbiome and-

Naveen Jain:

And oral lozenges that will be poor probiotics and prebiotics for your oral microbiome.

Dave Asprey:

So, you suck on a lozenge, so your mouth is populated. I guess after all that I should wash with Listerine, right?

Naveen Jain:

So, Listerine by the way, is one of the worst things you do.

Dave Asprey:

Totally. It's terrible.

Naveen Jain:

It's a completely terrible thing to do because it kills all your oral microbiome. Now interesting thing is oral health, most people think about is vanity, about why do we care? Most people don't realize your oral health produces nitric oxide. It is directly connected to your heart health. It is now being implicated in Alzheimer and many other neurodegenerative diseases.

It is connected to diabetes; it is connected to colon cancer. So like colon cancer is actually now being linked to fusobacterium necrophorum, which actually is oral microbiome. And then what's happening is a lot of people are taking Nexium or other anti-acid drugs. And we swallow about one and a half liter of saliva.

Dave Asprey:

These are the proton pump inhibitor drugs, specifically, not the histamine two blockers?

Naveen Jain:

That's right. The PPI drugs, right? So, when you get rid of the acid in the stomach, all the saliva that we swallow all the time, these oral microbes normally would die in the stomach acid. And if you have PPI inhibitors, now all of those things don't get killed and end up settling in the gut where they don't belong. And sometimes they end up actually causing colon polyps and colon cancer.

Dave Asprey:

Wow.

Naveen Jain:

And so autoimmune disease, same thing. One of the interesting things we found was you look at a lot of the people who have Alzheimer's disease, they have very high level of ginger pain, which actually comes from pre gingivitis. So pre gingivitis, when you have inflamed gums, what's happening just like a leaky gut. Now you have leaky gums. That means your bacteria and viruses are now going into the blood from your mouth.

Dave Asprey:

It's a massive health problem to do that. Yeah, I had so much of that in my mid 20s when I was dealing with chronic fatigue. I'd go to the dentist three times a year. I did everything you were supposed to do. But I was living in an inflammatory environment, eating the wrong foods, including tons of spinach and kale, which were causing a tartar buildup of mineral and oxalic acid on my teeth that was contributing. And when I finally got control of that and stopped eating the stuff that didn't work for me, my teeth got whiter, and I stopped putting this amazing level of tartar down and my gums haven't bled in years.

Naveen Jain:

And you figured out in our custom toothpaste that we are building the underlying gel, it actually removes the plaque, not by rubbing its silica like every toothpaste out there, it's basically just rubbing out. The basic is aggressive, right?

In this one, it is simply using, and you and I talked about MSM [inaudible 00:51:58] EDTA. Reduce the plaque on [inaudible 00:52:01].

Dave Asprey:

It was funny at dinner last night; Naveen was just telling me some of this new stuff. I said, "What did you do? Put some EDTA in there?" And he goes, "Yes. How did you know?" EDTA is a synthetic amino acid that specifically dissolves calcium and a few other minerals, and you use it to remove plaque, to remove biofilms and to remove even in the arteries, anything that's [inaudible 00:52:19].

Naveen Jain:

And the problem was you didn't know how to penetrate the biofilm, which is what MSM does.

Dave Asprey:

Exactly. It's beautiful. So, I'm all in, I haven't gotten mine yet. When is it shipping?

Naveen Jain:

It's going to be start shipping very soon.

Dave Asprey:

Very soon. So, you don't quite know yet, but will I be one of the first people on earth to receive this?

Naveen Jain:

Well, I will make sure that you do get one.

Dave Asprey:

Oh yeah, but not the first one. That was a nice dodge, Naveen.

Naveen Jain:

No, because I'll probably be first one. That's the reason I'm-

Dave Asprey:

I said, one of the very first. I hope you're the first and your whole team should be, and if your teeth don't fall out, then I want to do it.

Naveen Jain:

Well actually I'm using it right now.

Dave Asprey:

Oh, you are using it right now. Good deal. Awesome.

Naveen Jain:

I love it, by the way. It is so addictive. Because you feel so fresh in the morning. When you wake up, you just feel fresh and you rub your tongue against your teeth, there's no biofilm.

Dave Asprey:

Let me ask you this. Now we're going to into serious biohacking. Do you tape your mouth when you go to sleep? Have you come across this?

Naveen Jain:

First of all, it's a good thing to do because when you are actually breathing through the mouth, it dries up your mouth and it changes your oral microbiome, and it changes the pH value. So, by the way, it's very interesting, you mentioned a lot of people think eating sugar really causes cavity, but it turns out that it's not true.

What happens is when you eat sugar, your oral microbiome is actually produce lactic acid that reduces the pH, right? So, when your pH goes down is when all of these bacteria start to cause cavities, lactic acid. So, it's not the sugar that does that. It is what these microbes do. But that is what does that.

Dave Asprey:

It makes so much sense. And we have all these complex systems. I would love it, I already have my gut bacteria and my metabolism to the point, I can eat sugar. It doesn't really do anything bad to me. I can look at my CGM, I-

Naveen Jain:

But I think you need to worry about the oral health as well.

Dave Asprey:

Oh, I mean I take care of my oral health and I-

Naveen Jain:

I'm going to get you good toothpaste at least. You're good at analyzing this.

Dave Asprey:

I'm getting the Viome stuff. I'm very interested in this. I'm mean test it out against what I'm using. Because it's a fascinating idea.

Naveen Jain:

You've been using volume for a long time, aren't you?

Dave Asprey:

Oh, I have, yeah.

Naveen Jain:

And by the way, you have to tell you a story about your micro biodiversity changed because of that.

Dave Asprey:

Well yeah. When I was writing Superhuman, my big anti-aging book, I'm very non-judgmental except for about kale because it just deserves it. And that's mostly humor. So, I looked at all the data and there's

abundant data that says prebiotic or soluble fiber extends human lifespan. I mean hundreds if not thousands of studies.

Naveen Jain:

If you have the right organism that actually producing butyrate because of that.

Dave Asprey:

Well, they'll grow if you take it on a regular basis, even if you don't even take probiotics, which you would get if you're doing Viome anyway. And you have the whole carnivore world. I mean I was in that back in 2007 or something, when I was developing the Bulletproof Diet. I went full on carnivore for three months and I gave myself leaky gut, I got autoimmunity, I got an egg allergy and stuff happened because it doesn't work for most people long term.

You don't do it for a month, I'm all over that, it'll shift your gut bacteria, and some go vegan for a month. That's fine. Neither of those is long term sustainable. But if you ate meat every day and you had 60 grams, which is what I did of a mix of soluble fiber, on my Viome score, I got four times the number of species.

In fact, I had the number of species of someone much younger than me and you can tell age through diversity. So that was a pretty magic finding where okay, yep, the data says that should happen and it did happen. And Viome is how I validated it. So ideally that probably lowers my Viome age. I don't know what your equations are there.

Naveen Jain:

Well do me this, remember, the way we measure age is very unlike anyone else. We are very quantified. We say, hey, this is your biomarkers of your blood stool and saliva. And we have biomarkers for every different age and say, where do you fall? And that's how we measure.

Dave Asprey:

Have you ever correlated the Viome age with a Horvath score?

Naveen Jain:

Point is that Horvath score is looking at one thing, which is methylation in your genes. That's only one part. So, they're looking at the epigenetic on the human gene side, but they completely ignore the whole microbial side. And we now know that just because APOE4 is there, you still need the C pneumonia to actually go, may cause Alzheimer's. The point is you can't ignore 99% of your body and say I made a clock that is really good for 1%.

Dave Asprey:

I hear you there. Are you going to validate that? Because right now there's Horvath clock and then there's about 16 other aging clocks.

Naveen Jain:

There is eye clocks, so you can look at the inflammation, cytokines and they have an aging clock which caught up that. We can literally make an aging clock from anything.

Dave Asprey:

Check this out. If the Viome aging clock correlates, you could predict someone scoring all those other things probably from spitting in a tube.

Naveen Jain:

You could. But the point is they are not the ground truth. So, where is the ground truth?

Dave Asprey:

Well, here's the thing though. If you speak to any, in fact I've spent a day with Steve Horvath, who by the way guys, we're getting super nerdy, but this is how you measure the actual age of your tissues, which would be important to know if you're an anti-aging person. And Steve invented the first DNA methylation clock. There's an episode on True Age and all that. Yeah. So, it'd be really useful in that community, they just want data and each of the people has their clocks says, here's why my clock is better. And if you show that your clock is as good or better or more broad-

Naveen Jain:

But how do you know it's better or worse? Because there is no ground truth to call it better. So, they're all different. So, if you do is simply based on your blood and you look at the methylation in your finger prick blood, what are you looking at? Basically, looking at white blood cell because you know the red blood cells is just hemoglobin, there is no nucleus there, right?

So, you're looking at white blood cells. That tells you literally on a white blood cell what the methylation is. That may not be same in your lung. That may not be same in your heart, that may not be same on your brain. So basically, what I'm saying is that based on one thing, you can make a clock and you can see that's good.

And I think it was the best when it was done. And just because everyone has a clock and we do two, it's hard to know the biological age. So, it's really difficult to see is it better or worse or the same or you're just as bad as them, or you are as good as them or you are-

Dave Asprey:

So, your argument is you're doing a broad trial from many systems to see how they're behaving and interpreting that.

Naveen Jain:

And then by the way, we are doing it with large data, no one has ever built anything on half a million people. Most researcher will take thousand people, 2000 people, but nobody does it on a million people.

Dave Asprey:

That's impressive.

Naveen Jain:

And that's really what we look at. 600 trillion nucleotides. Now you're looking at the data that has never been looked at and that is the power of big data. Now our biological age is going to keep getting better and better and better as we get to quadrillion data.

Now these numbers are starting to look like quadrillion. That's even more than the deficit of our country.

Dave Asprey:

Oh wow, that's incredible. For now, just we're just giving a little more time to inflate, Naveen. That'll be good. Well, all right, so people can get the new Viome, what do you call it? Dental gel, or toothpaste? What's the word for it?

Naveen Jain:

So, you're going to do an oral health test and based on that you're going to personalize oral gel and you're going to get personalized oral probiotics and prebiotics. So oral lozenges. And you can do a full body that has everything in there, your oral health, your gut health, obviously the human host health.

Dave Asprey:

So, I think we have a code for people, don't we? Guys, I'm really prepared for this because this is all about selling it, right? It's viome.com/dave, use code Dave 10. So, you can save 10%. And you said this is 299?

Naveen Jain:

Yes.

Dave Asprey:

Guys, just do the full body intelligence. If you could spend \$229 on any one small panel at a normal lab and not get 10% of the data you get in this in terms of data per dollar spent, there's nothing in the world like full body intelligence.

Naveen Jain:

The point is to really do something with it. Getting data is one thing, and then getting the things that actually make you better for \$5 a day, for heaven's sakes.

Dave Asprey:

And then from there, with the full body intelligence, you can get the supplements, you can get the probiotics that are custom printed for you. And then you can also get the gel.

Naveen Jain:

I think the cheaper option, in my humble opinion, you just simply pay \$179 a month. That's \$6 a day.

Dave Asprey:

179 a month.

Naveen Jain:

And you get a kit for free. So, you literally get your kit every single year. So, you can see how the things ... One per year. And you can do as many as you want during the year if you want. But literally you get kit every year in the beginning, and you get all your supplements. So, vitamin, mineral, herbs, digestive

and all the stick pack, probiotics, prebiotics, every single month and every year you get to retest and every year it gets adjusted, and you can do every six months if you want.

Dave Asprey:

And if they use Code Dave 10, it's 10% off every month.

Naveen Jain:

Sure.

Dave Asprey:

Is that how it works?

Naveen Jain:

We'll make it work.

Dave Asprey:

Okay guys, that is amazing. So, think about it, if you subscribe and you get your baseline way more than you'd ever get in a multivitamin and probiotics and prebiotics, you were going to spend that anyway, but you didn't get a test kit.

So now you've got this amazing test. You get all the data; you get retested every year for free as part of that subscription. All I want you to do is feel amazing all the time with the least possible effort. I don't want you to exercise, I want you to come to Upgrade Labs and do 10% of the time and get the same results or better.

I want to set you free so you can focus on stuff that matters, like service to others, being nice to people and evolving yourself. This, for the vast majority of people, this new model from Viome, it's simpler than what you do now.

It reduces curiosity and a box of custom things works. And for travel, gee, can you take these two things with you, even in your carry-on luggage? Yes you can. And then you're always getting the stuff you need to be healthy. At the same time, I take my smart drugs, I take my cognitive enhancers, I take special herbal stuff, a whole bunch of cool new cutting edge anti-aging stuff on top of Viome and that's okay.

But if you wanted to blow your supplements out of the water and get amazing probiotics, and again Naveen, I don't want to say that I'm unfaithful, but this isn't the only probiotic I take. But I do take these, and they make an amazing difference. You can feel it within two days of taking it. But I wanted some that had special powers. So, I take some special power ups.

Naveen Jain:

You're making yourself superhuman.

Dave Asprey:

There you go. And so, this is what I want you guys to understand. You want to like a simple baseline, it's not cheap at 179 minus use code Dave 10 and save whatever, \$17. It's not cheap, but it is incredibly effective and it's not expensive compared to three bottles of high quality supplements and you're getting 55 ingredients potentially.

So, I just want you to know, I think this is a win-win thing where you're better off to do this and then take all the other cool stuff I talk about. That's exactly what I do. Naveen, I can't wait to brush my teeth with the new Viome stuff, gel if we're going to call it, Viome gel, that's based on my own oral microbiome and using custom oral probiotics that affect my gut probiotics, in addition to using the probiotics and prebiotics I already take.

If you guys haven't figured this out, we're building ... Here we go. I got the picture in my head. In some of these superhero movies, they show up and there's the person who makes the superhero costumes and like, oh, they have to make the right costume for your superpowers. You run too fast, so your clothes will come off.

Naveen Jain:

[inaudible 01:04:20] different costume than Superman, aren't they?

Dave Asprey:

Yeah, exactly. And it has to be customized for the superpowers. So, there you go. You're like the tailor who makes those superhero costumes, but it's made out of bacteria. I'm pretty weird, huh?

Naveen Jain:

And by the way, and vitamins and minerals and stuff. Yeah.

Dave Asprey:

Anyway, that's the picture guys. You wanted something that's just going to unlock all of your stuff for the least possible money, least possible time, least possible complexity, least possible confusion. I think Naveen's done something here that's going to get you there. So viome.com/dave, use code Dave 10. And guys, I don't know, a better use of \$179 that I can think of.

If you don't have your minerals and vitamins, why are you spending all your time on expensive crap when your baseline isn't there? By the way, my new book doesn't talk specifically about this stuff, but the point there is that if you don't have the basics covered, doing the expensive hacks is just dumb. So, there you go. Thanks, Naveen.

Naveen Jain:

Well, thanks Dave. It's always a pleasure, you know that. We always have fun doing it.

Dave Asprey:

Yeah, it's always fun.

Naveen Jain:

Well, good to see you.

Dave Asprey:

Likewise. Guys, if you like this, you know what to do. Pick up some Viome test kits, get just the oral microbiome. But understand if you're frustrated, I'm not getting results, I've done everything to try and sleep better and I've done all this, I've done all that, yeah, I spent a million dollars doing all that on myself and it did work.

But I really should have spent maybe \$179 a month plus a little bit more. But the idea is knowing what to do is what takes almost all of your time and almost all of your money. Let's cut that out. And I really truly want you to try this because what you're doing now may work, it may not work, but let's just get the data.

And this is why I'm here, it's why I do the show. I curate the most amazing new tech, the smartest people, people you might not have heard of, people like Naveen you've heard of who are doing really good work in the world. And he's always welcome on the show because you're always going to learn something. See you later.

Naveen Jain:

Thanks.

Dave Asprey:

All right, we've got to get up to it.