

## Home Lab Testing 101: Your Guide to Great Results – Dolce Conde – #922

Dave Asprey:

You're listening to The Human Upgrade with Dave Asprey. This year, I'm really focusing on making sure that you know why you're listening to an episode up front. We're going to cross over about a thousand episodes this year, and more than 250 million downloads, which is something like at least a hundred full human lifetimes of listening to podcasts. And my thanks for that. Thanks for your time and your attention.

So, here's what you're going to get it from the show today. You're going to learn how to use lab testing at home effectively. You're going to learn the different types of it, and you're going to learn which labs you might want to consider ordering. We're going to go through the pros and cons of all the different things you can do. Why would you get a spot test? Why would you get those little pipette things? Why would you have a phlebotomist come to your house?

The reason being that if you'd like to know your susceptibility to any disease, you can get that with home lab tests. Since I started biohacking, the cost of lab tests has dropped dramatically, but the availability has gone up, and the quality has probably gone down, because you get the same tests from different labs, and with the same sample, you get different results. And there's a reason for that. We're going to talk about that as well.

So, how do you save money, how do you do it right, and how do you know what to do? That's kind of cool. And even if you're not a full on biohacker, there are some basic tests that your doctor probably isn't ordering that you should know, even if you only do it every year or every five years, that could possibly save your life, and will almost certainly make your life longer and more pleasant. And that seems like a good deal to me.

All right. Our guest today is actually someone that I've entered a business partnership with. And I reached out to my friend, Dolce Conde, who runs Knowing Labs, and I'm an advisor of Knowing Labs, and she provides very high quality lab work. You can also go to Knowing Labs and get a broad spectrum of panels. Dolce, welcome to the show. You are our expert to talk about lab testing in general. And of course, we're going to talk about your labs, but you're an industry veteran, so you're about the industry at large.

Dolce Conde:

Thank you so much, Dave. It's an honor to be here, so thank you for having me.

I'll give you a little bit of story about us. We started doing laboratory testing back in 2012, and it has been a huge change over the past few years on how the industry is moving. And definitely, we have a lot of big laboratories nationwide, international, that are covering the most of the testing. But the type of testing that they provide is very different to what we are doing under Knowing Labs.

So, just to give you some perspective, when we started working in the lab, we were having a lot of clients through the physicians, through clinics, we work with nursing homes, and it was very challenging because healthcare, the healthcare system in this amazing country works in a very unique way. We were getting order from physicians, a lot of lab testing that have a lot of restrictions. For example, a lipid panel. Insurance has authorized the people to run a lipid panel only three times per year. Or test like the hemoglobin A1C. You can run it only three times per year.

So the doctors were sending us a lot of laboratory testing, and the insurance are declining for that test, and we were stuck in the middle. The doctor wants to know this, but insurance wants something different. The other challenges that we were facing is that every time that we get a sample

from a patient, it was because the patient had already some symptomatology of a potential disease. So it was more like reactive. It was a different way to run lab testing back in the day.

Dave:

Many of the anti-aging doctors I work with have started saying, "No, no, no. I want to always make sure that my patient samples go to exactly the same lab." Because if you send your vitamin D test to lab No. 1 operation center versus lab No. 2 operation center, you can have a variability in your results. And so, if you're trying to say, that might be okay for a broad population, but if you're going to send the same sample in three times to see if your vitamin D supplements are raising your levels the way you want them to, wouldn't you want to get the same lab to do the same test with the same lab techs, on the same equipment, so you get a reliable number that's for you, versus an average reliable number? And I think that's a big problem right now.

Dolce Conde:

Correct. And also, even if the doctors are using exactly the same brand, the same one laboratory, these one big laboratories have facilities all over the country. So your sample may go to Dallas this time, but maybe go to a different state next time. So it's not inaccurate, but it's more a lack of consistency on the results. And there are other companies who are doing something similar to what we are doing, but they don't own the laboratory, so they are sending not just to these two big brands' laboratory, but they are using probably 20 different laboratories. So when the clients order a test, the client doesn't really know if it will be sent where, and then, again, the problem is the consistency of the results.

Dave:

Okay. So, I'm going to just say that we have a bit of a problem with consistency, and this is not just for the main kind of labs that are used by doctors in the hospitals all over the place. Even some of the genetic testing companies, there are people who have sent their genes out, like the same sample, the same day, to two different genetic companies, and gotten different results. Now I work with a DNA company. I'm very happy with what they do, because these problems have been ironed out.

So, what I think is going to help solve this problem is, certainly what we're doing together with Knowing Labs, is to say, okay, what if you just, since you can now send your sample directly from your house to a lab, you can have the same lab do it. So I said, all right, this seems like the right way to do it for boutique lab testing, that's also relatively affordable, because there's been some changes.

When I started on my journey 25 years ago, there was no spot testing at home. There was no little... that stuff. You literally had to go to a doctor. You had to beg for a lab test. The doctor would say, "I don't really think you need it." And you'd say, "But I want it." And they'd say, "No." And literally, this would happen, and it still happens if you go to a normal provider, because they're worried about being yelled at by an insurance company. So, then you could say, "Well, what if I'm willing to pay?" And they'd go, "All right, fine, if you're willing to pay, whatever." And then you go do it.

So the world has shifted, but you still have to go to the doctor, and maybe the doctor will draw. And if you've ever gone to have your labs drawn at a major lab company, you're kind of going through a very standard process that's just not very nice. So if you can do that instead at home, it's different. What happened with technology that let us suddenly get all of this stuff from home that used to require a big old vial of blood? Like, what was the shifts over the last 10 years?

Dolce Conde:

It has been thanks to the effort of other companies who started before us, and they were trying to provide an alternative and a solution where people can be really making the decision and being empowered to take care of their information, their data, so they can monitor how their hormones or how their biomarkers are moving and are shifting. So, the technology has also improved.

Back in the day, the only way to get a laboratory test is through the puncture, which you need a phlebotomist to actually draw blood from your veins. And as the science has progressed, and there has been a better quality of the results, to have access to actually you take the sample yourself. It's usually in a finger prick, whenever it is blood. There are other things that we can run that are based on saliva, or based on urine.

But speaking about blood, there are the alternative to be able to do a fingerprick, collect the sample in a very easy, convenient, non-painful way. It's not really very invasive. And you can do it in a, what we call a DBS, which is a dry blood spot card, and you can also do it with a capillary tube, which is like a little small tube where you put a certain amount of blood into the tube and ship it back to us. So, it is very convenient.

Dave:

And it's like one drop of blood, just for... Some people always have weird things about blood, but it's literally, you prick your finger, there's a little tiny drop, and you hold this thing up and it sucks the blood into a little tiny vial, and that's what we're talking about. So this is not a traumatic thing. It's minor, to the point you can do it with kids and they'll be okay.

Dolce Conde:

Yeah. Actually, I have done some tests to my kids and they are like, totally okay with that. It's not really painful. It's not one drop of blood. I want to clarify that there is like multiple drops.

Dave:

Yeah, the pipette thing. The capillary tube is like several drops, but it's one drop at a time. It's not going into a vein. It's pricking a finger and squeezing it a couple times. It's a minor thing.

Dolce Conde:

Correct. Whether they put it on the dry spot card, and there are different spots that they can need to fill out. Some cards are from five spots, or some other cards are from five or 15 spots, or they do it with a little tube, they collect about the same amount of blood. But yeah, it's a drop at a time, and it's not invasive, and you can perform it yourself. You don't need to know anything about phlebotomy work, and it's convenient. It's convenient when you can do it from the comfort of your home or your work. You don't have to go to a clinic or to be in a waiting room, hoping that somebody will take the sample from you. Especially nowadays, that there are many doctors' offices are still closed, or there is the concern about don't get too close to other people. This is an amazing alternative.

Dave:

And I just value people's time. I have always been kind of angered by the fact I have to go wait in one waiting room to get a permission slip, to go wait in another waiting room to get some goddamn blood pulled out of my arm, right? And you're saying, oh, here you go. It arrived in the mail, or you picked it up at an Upgrade Labs. You stuck your finger, you dropped it in the mail and you got your results, and I think that it's great. But what I don't know is the level of accuracy between a dried blood spot, between

a capillary tube, and between actually pulling lot in a vial with preservative, the way you would with a phlebotomist. But tell me, should I go wait in line to get the full vial if I really want good results? What's the difference in lab processing between these three different methods?

Should I go wait in line to get the full vial if I really want good results? What's the difference in lab processing between these three different methods?

Dolce Conde:

The actual lab processing in the equipment at the lab, it's exactly the same. Believe it or not, exactly the same. We use a different type of technology, of course, because whenever we use a phlebotomist with a puncture, the type of equipment is different than when we are using a capillary tube, or we're using the dry spot card. But it's really accurate. If I have a preference, if I can recommend a preference, honestly, the capillary tube is as reliable as any puncture, but the dry blood make it very, very, very convenient, because the stability of the sample is longer, and we can also service our international clients, so there is no conflict with crossing the border. But if you are going to try to transfer plasma, or the actual blood from one country to another, it has a different type of regulations. But it is very reliable, though.

Dave:

Will Knowing Labs then, are you allowed to send the dried test cards anywhere on the planet, right?

Dolce Conde:

Correct.

Dave:

Okay. You guys understand what this means. This means that if you live in any country anywhere, and you can't get a lab test in your country... But New York state has very strange laws that prevent most lab tests from being shipped there. Can you ship the cards to New York?

Dolce Conde:

You are absolutely correct. We cannot ship the cards to New York. And we want to ship to New York, but we are not allowed to do it. There are particular regulations in the state that we are prevented from doing. So we are actually, we are now looking for an alternative solution, and I think we're going to be able to do that in the next few months. But for right now, we cannot do it. It's easier for me to work with people in Germany or England than to work with people in New York.

Dave:

So you can't do it yet, but if you lived in New York and you got something forwarded from a PO box or something, you could easily draw the stuff and then send it, and because it's dried blood, at least in some of what you do it's dried blood, it doesn't have to be in Ziploc baggies and biohazard and all that stuff. It's an innocuous thing, right? Compared to the pipettes.

Dolce Conde:

Well, we still protect the quality of the samples, so even in the dried blood card, we put it in a biohazard bag just for you standard repercussions. And we provide all that supplies, so they can just put it in an envelope and ship it back to us.

Dave:

It's in a normal envelope though, that doesn't have to be like a live blood with stickers all over it and all that stuff, that when you, like insulated containers, all the stuff that you might imagine for that.

Dolce Conde:

No, that doesn't require... Another important thing, Dave, it doesn't require a particular temperature. Some samples in a traditional way to run laboratory testing are required to have an ice pack, so you can preserve the quality of the sample. In this particular case it's not needed, not even with the capillary tubes, you don't need to do that. So it's very convenient.

Dave:

Okay. So even for the little tubes, you don't. All right, so this is something that is striking a blow for your right to know what's going on in your body without needing a permission slip, right? And this is a big deal, and it's also remarkably affordable now, compared to where lab testing used to be. Now, if someone was to send in to Knowing Labs a dried blood spot and the little micro capillary, tiny little tubes, it's both the same amount of shipping, right? They're little envelopes. It's very easy to do. Which one gives you better results?

Dolce Conde:

They both get very good results. We are highly regulated by CLIA. We're a high complexity, CLIA licensed laboratory. We're audited all the time, and both methodologies have passed the audits because they're both reliable. The equipment that we use and the methodology that we use is very, very, very important.

However, there are some difference on the time that it takes to process the test. So with the capillary tube, it's faster to run the test than with the dry blood spot card. So that's something that changes because the dry, the dry blood card requires a different type of process, where we need to use different type of chemicals to convert that, let's call it piece of paper, that card into blood again, and it requires a longer process for processing.

Dave:

Okay. I like that. So, you can get equivalent results from those. And is that true for everything, even hormones or lipids, it's really identical results?

Dolce Conde:

It is identical results. Maybe there is a variant probably of 1-2%. So let's say that one is going to give you like 99% accuracy, and the other's going to give you 98% accuracy. So they're both very accurate, but it just, the way that we run the test changes, is what makes the difference.

Dave:

Okay. It changes on your end at the labs. It changes, but from a consumer perspective, if you're looking to get between 70 and 90 for your vitamin D levels, the way I recommend, whether you do a dry blood spot or a capillary, you're going to get the same number, but the capillary results will arrive faster.

Dolce Conde:

Correct. And the other difference as well is, there are some people that they're still more into the traditional way the laboratory testing has been done for many, many, many years, and when they choose the test, they choose to have the capillary tube, because it gives them some peace of mind, and they prefer that. And other clients, they prefer to do the dry blood card. And when we work with functional medicine doctors, they have a tendency to prefer to use the capillary tube, as well. So, we have seen it. Everybody has a personal preference, and it is their choice.

Dave:

Okay. That makes a lot of sense. And so, you like the pipettes as well, as a lab company, because you don't have to rehydrate the dried blood spot cards, which saves you chemical use.

Dolce Conde:

Clinical time and manpower as well, definitely. But we have seen still... There are some, as we also mentioned, there are some biomarkers we still draw with saliva. So sometimes in the kits that we send, we send, whether it is the dry card or the capillary tube, and we also send a tube for saliva, because there are some, whenever we are measuring particular biomarkers, we have seen better consistency, a better quality of the results with saliva over blood, believe it or not.

Dave:

Wow. Okay. So, that means that we could do an environmental analysis. You use more chemicals with a piece of paper, the dried spot card, but you use more plastic and materials with the capillary cards. Which one's better for the environment, would you guess? We're not going to know for sure.

Dolce Conde:

I really don't know. I think the card, it would be better for the environment than the capillary tube, but that's just my wild guess.

Dave:

Okay. I think the card would be too, and if we're going to increase, say, by five or 10X, the number of lab tests we do, there's a pretty clear argument that dried blood spot is a good way to do it, but I don't think that Dolce has actually gone through and looked at the amount of chemical stuff that has to be done on the back end. The production of that may be environmentally really expensive, but it's a good thing.

Dolce Conde:

I'll check into that.

Dave:

All right. Yeah. And that's a kind of a random question. People oftentimes don't think about it. One of the reasons that I want you to get your vitamin D levels up into that range, that's recommended by most of the anti-aging doctors I've worked with, and certainly that's the number in my anti-aging book, it's that if your vitamin D levels are higher, your risk of almost every large, major category of disease goes down. Your risk of all-cause mortality goes down. Your risk of being hospitalized for any reason, even the most popular media reasons, it all goes down.

And if you care about the environment, how about you don't go to the hospital, and you can actually drive a gas powered car, and if you avoid three hospital trips, you probably evened out the

value of you driving that sports car with explosions under the hood. It's that big of a deal. No one ever talks about that stuff.

So, get your labs, just get the main labs that reduce your risk. The number one lab that matters the most is vitamin D. I want everyone in the country to know their levels. If they're not where you want them to be, then you can either choose to get more sunshine, which probably won't work well enough, or you can take supplements, which can be very, very widely available. This alone would shift the entire health of the country or of the entire planet, if we just got people to get their levels up. It's not that hard, and it's actually quite affordable for everyone.

Dolce Conde:

Yeah. Well, knowledge is power, right? But we need to do something about it to be able to get that knowledge. So this is a very efficient, convenient, discreet, and affordable way to do it, and I think that this initiative that you have about the vitamin D test is going to bring a lot of good things to the people. So I think that's an amazing idea.

Dave:

If you go to [KnowingLabs.com/Dave](https://KnowingLabs.com/Dave), use code Dave, and they'll give you 20% off every test.

Dolce Conde:

Absolutely. We're very excited to support the community, your community. So, yeah, go to our website. Code Dave. 20% on all the panels. We have a lot of really good panels on the website.

Dave:

What about Canada? I mean, you can ship those spot cards anywhere. Are you allowed to ship to other countries?

Dolce Conde:

Yes, we can. The, the challenge that we have right now with Canada, and Mexico actually, is that whenever somebody orders a kit from our website, we send free freight both ways. Whenever we send the kit for collecting, and whenever they send the sample back. whenever we work with international clients, we cannot cover the freight, I mean the shipping and handling, just because there are different type of regulations.

So we right now are shipping it, but we don't cover the freight. Very, very, very soon, we're going to have an office in Canada, and we're going to have an office in Mexico, our neighbors, so we can, they can ship it free to that particular location, and then for that location, we can bring that. It just, it takes a little bit longer lead time, just for the transportation. Not because running the test takes longer, just because it takes longer to be able to handle the logistics.

Dave:

Okay. And people globally who want to do it, you can send them the spot cards, which are legal for them to send back, because it's not a liquid plasma kind of thing, it's not infectious, but they have to cover shipping. Because if you live in Switzerland and you want to get this done, then there's no way that Dolce, Knowing Labs could possibly know what shipping would be, say you're going to have to handle shipping. But this opens us up also to the Middle East. I have so many friends in Dubai now, and they're like, "I want to get access to this stuff," but they can't. So this lets you do it.

And let's talk for a minute about vitamin D levels, whether you're in Dubai somewhere else. The levels are between 70 and 90, are the levels that I recommend, and that most antiaging doctors recommend. Some people want to go up to a hundred. Above a hundred, you can actually have pro-inflammatory things that happen when it's too high. So it's not like, it's good, you want to have it higher, higher, higher. And when it's below 70, it's a problem, and a lot of people are in the tens and twenties. But my question for you, Dolce, is what's your vitamin D level?

Dolce Conde:

Actually, deficient. I ran a test last week, and I was like, wow, I need to get a better vitamin D, vitamins. I mean, I need to start getting more vitamins, because I think most of the population in, I don't want to say in America, in the world, every sample that we get into the lab, they are deficient. They're so deficient.

Dave:

Yeah. So, one side of arguments would be, oh, your vitamin D should be... Well, if everyone has it that way, then clearly we're just expecting something that's not reasonable. There's just one problem. We used to be matched with our mitochondrial DNA and our nuclear DNA. So guys, if you remember, your mitochondrial DNA is kind of the power plant electrical wiring set up for your body, and the environmental sensor set up, and then the other part of this, your nuclear DNA, is sort of what are the walls and other structures if your body was a building.

The problem is that your ancestors probably moved around and mixed around, so you are no longer set up genetically, from a mitochondrial or a nuclear DNA perspective, to actually be in the environment where your people came from, especially if half your people are from Africa and half your people are from Northern Europe. Good God, what's the right amount of sunlight for you?

Well, it's determined in large part by these vitamin D receptor genes. And when I got mine looked at, and I've struggled for years to get my vitamin D levels up. I would take five or 8,000 IUs of vitamin D. I couldn't get mine up. Finally, with genetic testing, I figured out, oh, I have the vitamin D receptors as someone who should live on a tropical island, but I have white skin, which means if I get enough sunlight, that I get advanced aging on my skin and it's actually not good for me, and my levels still won't go above 40, even after six weeks in Hawaii and getting wrinkly skin from it. It doesn't work.

So what that means is, you measure your vitamin D levels and you take some vitamin D, and you go, oh, wow, it didn't work. My number, I take between 15 and 20,000. I use vitamin D every single day for my body weight, my skin tone, my vitamin D receptors, right? So you don't know unless you test, and this is why testing is important. I would love to tell you, everyone should take 5,000 IUs of vitamin D, but it probably isn't the right amount for you, it's just the most likely right amount for you. That's why we're partnering on this test. It's that important you get your vitamin D numbers, because you don't know how much to take.

Dolce Conde:

It is very important because, well, you know this very well, it's affecting so many areas of our health, right? A low level of vitamin D is going to be compromising different areas in our body. And I just want to give you credit, Dave, because when we were developing the panels for Knowing Labs, the work that you have been doing inspired many of the panels that we put together. We were always thinking, a person who is proactively checking their health and wants to improve their health and their performance in all areas of their life, what they will be asking for. What do they need to know? So, your work has inspired many of the panels that we have, and we're very grateful to be working with you now.



Dave:

Thank you for that, and thank you for having me on as an advisor to help figure out some of this stuff for Knowing Labs. I just think we can do a lot better, and lab testing is a part of this stuff. Some people are asking from the Upgrade Collective, just about units of measure. Vitamin D in north America is usually done in nanograms per milliliter, and that 70 to 90 is what I'm talking about there. There are some international measures, where other countries will use different units, so 70 to 90, you'd have to convert that to your country's measure in order for that make sense. And what I think is going to happen when people globally order tests and get a result from Knowing Labs, they're going to end up getting these reported with the units right there. So if you look at it and go, it doesn't make sense compared to my doctor, either you or your doctor can easily use a conversion tool online to tell you whatever the levels are.

Dolce Conde:

Correct. And also, we are also going to mention that we're adding new panels all the time, so you want to be constantly checking the website for more resources.

Dave:

Okay. Got it. So, you're constantly upgrading it. And so, I'm kind of feeling liberated. I can get a spot test, send it in, or a little capillary test, send it in and get a broad swath of laboratory results. And then, the big question is, what do you want to go with? How do you know?

When you're working with your functional medicine practitioner, with your health coach, or you're just working yourself, there's plenty of knowledge and information out there. You can go and you can say, I want this detailed test, and you can get it. So I'm working on my hormones. My doctor wanted to just say, give me a TSH for my thyroid. But I already know from reading one of the Dave books, I need my advanced thyroid panel. So then, you can go to Knowing Labs and say, I'm going to get my advanced thyroid panel, and you can literally walk into your doctor and say, "This is why I have a thyroid problem. I'm fat, I'm tired, my skin is flaky, and you told me my TSH levels were numbered. But see, my T3 is off."

You have the right to do that. And ideally, most doctors would order an advanced thyroid panel, but if they do, they might charge a lot more money for it, because it's going to run through your insurance, and then your insurance is going to call you and say, "Oh, we didn't really want to pay for it." And after you've received 74 bills from your insurance company in varying amounts, and you've spent 60 hours of your life, you'll get your lab tests paid for. I would like to end that. Let's disrupt the insurance companies by just making your data, your data without their permission or your doctor's permission. That's why I care about this so much.

Dolce Conde:

We have made the prices for the lab testing so affordable that I can 100% assure that the price you pay for one of these lab tests is going to be less than the copays and the insurance. So it is... And they can also use the HSA or FSA account, by the way. So if they have an FSA or HSA account, they can use it to buy the kits from us.

Dave:

So, that's important guys. If you're in North America, or at least I should say in the US specifically, not just north America, then you have the flexible spending accounts and health spending accounts. You can use HSAs, but not FSAs on this?

Dolce Conde:

Both. They can use both.

Dave:

You can use both. Okay.

Dolce Conde:

We have to legally, right, say that they need to check with their FSA and HSA rules. They need to check into that, but we haven't seen any problem with our clients. Every, all the equipment that we use has been approved by government. Every methodology that we use has been approved. So we're totally regulated by CLIA 100%, peace of mind.

Dave:

Well, that's why I'm an advisor. I'm an equity owner in Knowing Labs, and why I'm partnering with you, because I do my diligence on that stuff as well. You're using real lab testing stuff that's well understood.

Dolce Conde:

Yeah. We're not inventing a new piece of equipment. No, no. We are using equipment that is standard in the laboratory industry. And I just want to say that we're so proud of our thyroid panel. You mentioned thyroid a few minutes ago. We're so proud of that panel, because we really put the panel together. We were very thoughtful about what biomarkers were important to have the full picture for the thyroid. So to me, the thyroid is like the second brain in our body. I think thyroid regulates so many functions in our body that I was very thoughtful about putting a good panel for our thyroid.

Dave:

Where you have T3 and T4, and reverse T3, and all that stuff. Thyroid, it's one of those things. Anyone listening, if you're saying God, I just run out of energy. My brain doesn't work very well and I'm getting fat, even though I'm exercising like I used to, and all that, seriously, look at thyroid first. I honestly think about everyone over 45-ish, unless you have high functioning thyroid, above average, if you take a super tiny amount of thyroid, like an eighth of a grain, it's an antiaging replacement hormone, because your thyroid function declines with age. And if you have a younger functioning level of thyroid, you'll feel a lot better, and you won't get some of the weight that comes on with aging, and your brain works better. So I think this is one of the things that should be replaced as often as we replace sex hormones. It's an energy hormone. And we're going to get there, just give it another 10 years. That'll be standard of care for antiaging medicine.

Dolce Conde:

One of the slogans that we have used for promoting our laboratory testing is "you deserve to know," because we truly believe that people deserve to know what is inside of the body, rather than waiting for a physician to tell them what they should be checking or not checking. I mean, we have the right to know what is inside our body, so we can make better decisions.

Dave:

There you go. So, we talked about blood, but we didn't talk about saliva or urine very much. So, do you do saliva testing with Knowing Labs?

Dolce Conde:

We do saliva. We do urine. There are amazing panels that we have based on urine. We have a toxicology panel that usually work more with drugs of abuse, rehab centers. Those are our main clients.

We have a polypharmacy panel as well, which is a big deal in today's healthcare system, because sometimes if the cardiologist prescribing something to the patient, but the main doctor is not aware that what the cardiologist is prescribing, he's prescribing something else. And then another specialist is prescribing something to the patient, and there might be a risk of contraindications of those two, three, 20 medications together.

So, I think it's important for physicians to be proactive and be ordering a polypharmacy test, so whenever they see the patient, they know exactly what the patient is taking or not taking. Or they prescribe, let's say, an antidepressant, and the patient goes back to the doctor again, and they're still not improving, and the doctor prescribe a higher dose or a different brand. But reality, it might be not working because the patient is not taking it.

So this removes the guesswork and provides physicians with actual data, where they can see if the patient is taking something or not. It's also checking for over the counter medication, some herbals, and it is a very robust panel for polypharmacy. That's usually ordered more by functional medicine doctors, or even traditional doctors. We are the only laboratory in the country who has this panel. It's something that we developed ourselves, and it's very cool. It really can save lives.

Dave:

That is really cool. Polypharmacy is something that's just emerging. It's a part of the systems pharmacology line of thinking, which is also leading to systems nutritional supplementation. So, who knows, maybe at some point, we'll end up with a panel around that. I'd be happy to chat with you about it, but I think there's a lot of development to be done. But the idea of polypharmacy, guys, is that if you're taking multiple medications that are interacting, you can probably see it in your urine metabolites.

So, we talked about how you get a lot of urine stuff, but how you collect urine and then send that? This isn't a spot test, right? I can't like, pee on a spot? You still have send it there?

Dolce Conde:

Actually, we send in the kit a cup where they can pee in the cup, and then from the cup, they transfer it to an actual tube, a little bit larger than the capillary tube, and then that little tube is the one that is sent, shipped back to the laboratory.

Dave:

Through the mail, or does it have to be all wrapped in a whole bunch of stuff?

Dolce Conde:

Through the mail, through the mail. Now those steps, we're only providing it right now in America, in north America, in the United States. We are not shipping those international just yet, because the regulation are different. So we're working on developing the panels with dry urine, so we will be able to transport international, but for now, those are those two tests are only in the country.

Dave:

Got it. It makes sense that you would only be able to do that in country, but it is better to be able to send that through the normal mail than the old way you used to have to do it, where there's a big Styrofoam box and all sorts of stuff. And can you do things like metal analysis in urine as well, to look for toxic metals?

Dolce Conde:

We don't have the capability to do that in this particular moment. And sadly enough, it was because in our market research, there was not a lot of volume justify with that test on. Right now, we have priority in other tests. We are launching a very robust line of STD, STI related tests, which we use with blood, we use with a vaginal swab, and we use also with urine. So there is a very good line on STD panels.

It's about information, and I think that it is also about being proactive. So most, usually, STDs, it still is a big topic, and I actually had the opportunity to speak about it in your last biohacking conference in Orlando. And it is a big deal, because usually, people don't get tested by STD because they are too shy. They are scared. They don't want to go and talk to their doctors about it until they have some symptoms. And whenever they can order, in the privacy of their home, it's discreet, it is convenient. They are the ones receiving the results. Then they can do something about that, and they can be proactively monitoring their sexual health. And I think sexual health is as important as our health overall, in every part of our body.

Dave:

Okay. It is important, and it's something we don't talk about a lot, but if you're young and dating or old and dating, it doesn't really matter. If you're dating and you're active and you're not getting a test once a year, honestly, you could be missing out on something that has a really long term effect on your brain and other stuff like that. So it's one of the things you should just do. And I highly support that, unless you're completely in a monogamous situation, in which case you don't have to worry about it.

Dolce Conde:

And the other line of panels that we're developing is for food sensitivity, which is something very much needed. I think that we have been asked a lot about releasing those panels, so we're working on that right now, as well. Very exciting.

Dave:

What would you recommend, lab test-wise, for people who are having a hard time losing weight? We talked about thyroid, but what else would you do on like, your weight panel?

Dolce Conde:

We have a weight and energy panel that we recommend everybody. It's also basically checking their hormones. But what I do recommend everybody is to get the full panel. There's female hormone profile and a male wellness panel, which is all hormones as well. And we recommend everybody to start with that, because it gives you a clear picture of what is happening in your body. So sometimes people is not managing their weight properly, despite the effort that they're doing, because there is some something with the thyroid, or there is something with their hormones. So it is better to check that.

If they just want to pinpoint that, well, the weight and energy panel will be perfect for it. We have another panel that is a sleep and stress, and sometimes people is not sleeping properly because

their level of stress is very high, and that's affecting also the weight of the person. So I think it's better to get a full panel, because they're going to get all those biomarkers check.

Dave:

Okay. What about cortisol? Can you guys get cortisol? Normally you need a cortisol daily, kind of... The ones that I've seen are saliva that you're getting. Are you getting blood cortisol? Are you getting saliva cortisol? How does that work?

Dolce Conde:

We have saliva. We have some biomarkers in saliva, and cortisol is one of them. We can do cortisol AM and PM. And I felt that it was better for somebody to be using a saliva tube, than to be doing a finger prick two times a day. So, that's what we did in saliva, to make it convenient for the patient or for the clients to be able to collect the sample. And we can, we have had some physicians requesting to be checked four times a day, so we have the capability to do that as well. But our standard panel either checks for once a day or for twice a day.

Dave:

Okay. Got it. And I think cortisol is very important, because we have this weird relationship with cortisol, where cortisol is the stress hormone, therefore it's bad. Okay. People don't know that bodybuilders actually take bioidentical cortisol in some situations when they're over training to help them recover faster. Like, how does that work? Oh, it's because cortisol actually give you power. Cortisol is quite useful.

Chronically elevated cortisol is bad. Your ability to turn on cortisol when it's necessary is important. Cortisol is a circadian hormone, which means it should spike in the morning. Oh right when you drink your coffee that helps it spike, and then helps you. Oh, wow, you mean all that happens with cortisol? So it's fascinating, but you've got to know what your levels are if you're having a hard time with weight gain, because chronically elevated equals I have a problem with weight gain.

And if it's too low, which is something that I've had for much in my life, it's a genetic thing. Man, low cortisol is actually worse than high cortisol, in terms of cognitive function, in terms of resistance to infection. So if you're walking on right now and you have low cortisol, and then you get exposed to whatever is going around, your odds of getting sick from it go up.

And you go, oh, gee, was I the perfect storm? Yeah. I lived in a house that had toxic mold, which increases your risk of respiratory illnesses, and I had low cortisol, which meant I got strep throat every single freaking month for more than 10 years, right, because of this. Had I known my cortisol numbers, or known about the toxic mold thing, I could have raised my cortisol the way I do now to normal levels, and I would have been very, very resilient to infections the way I am now.

That leads me to the inflammation panel. Does it have interleukin six? Can you tell me about individual cytokines? What can I get there?

Dolce Conde:

Well, we have an inflammation panel, actually, at the same time, it was inspired by you.

Dave:

Yeah, that's why I'm asking about it. I know. I helped create it. Tell me about it.

Dolce Conde:

Yeah, you helped create it. I mean honestly, after reading your books, I was so inspired to increase the type of... to give the number of panels, but also the type of panel that we have, to change that and improve it. So, inflammation was one of them. So we're very happy to offer that.

And it has, what I have seen, Dave, is that there is a lot of lack of education about why it's important to check your inflammation levels, and they are the cause of so many diseases. And we were following, back in the day, we were following the information that you put in the book, Super Human, and that's how we created this panel. So we're very, we are trying to bring more awareness of the importance of this panel to the people.

Dave:

So, I believe that if you have your inflammation under control, you have your hormones under control, you have your thyroid under control, you are probably going to have an amazing quality of life, and you're going to spend a lot less time in the hospital. And if you do get sick, which by the way happens to all of us every year. Just as humans, we have a functioning immune system. So what happens is, regular exposure to things like bacteria and viruses builds immune strength, and you end up having a robust immune system.

So what I'm saying here is that if you've got your inflammation panel under control, you have adequate, but not excessive cholesterol. You have enough energy in your thyroid system. That your ability to go out and do the immune system training that happens every time you get on the subway, that happens every time you meet other people, by design in mother nature, this is how it works, then you're going to be able to handle the immune system training, and you'll build robust and healthy immunity, so that when something new comes along, you are one of the people who's able to handle what life brings your way.

And just knowing where you are is useful. If I had known this when I was 16, or when I was 25, I would not have taken antibiotics every month for 10 years. I would've had a better functioning brain. I would've been nicer to people around me. I wouldn't have weighed 300 pounds. Just from knowing the right lab tests. Just from knowing what's going on and knowing what to do about it. This is why I'm so passionate about biohacking. And funny enough, I helped Dolce name Knowing Labs. So, there you go. If I had only known.

Dolce Conde:

I knew you were going to say that. I knew you were going to bring that up. So yes, it was actually a brainstorm meeting, and it took me a while to actually be convinced. But when we did the market research, everybody welcomed the name, so you were right on the spot.

Dave:

Well, thank you. Just one of the things I do when I'm an advisor and investor in companies. So, I just want you guys all to understand that you now have the right and the ability to get lab tests without having to pay your doctor. You still have to pay your doctor to look at your lab tests, and you can go to your doctor and ask your doctor which lab tests are the right ones, and get them afterwards. So, I encourage you to partner with your doctor or your health providers. But if you just want to get numbers, or your doctor won't cooperate with you on this, you have the right to just do it. And it's very affordable this way, especially [KnowingLabs.com/Dave](https://www.KnowingLabs.com/Dave), use code Dave, and you'll get that 20% discount.

Honestly, everyone with kids should be able to, for a very affordable level, know their vitamin D levels, know their basic health things. It's critically important, and this is something, if you have four people in your family, don't just order yours. Order it for your kids. Order it for your parents. Order it for whoever the heck is around you in your home. And that's going to help you guide how much vitamin D you take. You may think you're taking enough, and you probably aren't. And you may think that you're taking enough, and you might be taking too much.

Wherever you are, you need to know this, and you need to know this always, because having adequate vitamin D is protective against all types of bacterial and viral infections. It won't stop you from getting them. It just means you're much less likely to get them. And this is something that's just worth doing. And yes, you should also be in the sun. It's just probably not going to give you enough. The sun will activate the vitamin D you take orally.

You can get a vitamin D test from Knowing Labs a couple of different ways. Go to [KnowingLabs.com/Dave](https://KnowingLabs.com/Dave), use code Dave, get 20% off. And if you just want to go to [DaveAspreyBox.com](https://DaveAspreyBox.com) to get the box that has the vitamin D test and a bunch of other good stuff, you can do that as well.

On that note, Dolce, thank you for walking us through those three different types of labs, letting people know you don't have to ship big vials of blood for most tests that are out there, and for just putting together a boutique lab testing service, where you always know that the same equipment, with the same settings, is used in the same process, so you can see how your blood tests change over time, versus having to go to different labs, and not knowing if that was a variable that mattered.

Dolce Conde:

Well, thank you so much for making everything that you do, so educational to the people, and for bringing so many resources and awareness, what is out there, available for people to improve their lives. So, thank you for having us.

Dave:

You got it. See you all next time.