

Going Beyond Traditional Medical Testing Using Nutritional Genomics

Chrissie Williamson, PhD



Rebekah Kelley: Welcome to the Humanized podcast, all about personalizing your health. I am your host, Rebekah Kelley. And today we'll be discussing Going Beyond Traditional Medical Testing Using Nutritional Genomics, with Dr. Chrissie Williamson. Before I introduce Dr. Williamson, I want to remind everyone to subscribe to get all of our variety of casts in audio, video and transcription at HumanizedHealth.com. I'd also like to thank our lead sponsor, Village Green Apothecary, at MyVillageGreen.com.

A little bit about Dr. Chrissie. She is a master of the biochemical and nutritional sciences and the owner and founder of Nutritional Genomics Institute. She has dedicated her life's work to revolutionizing personalized medical nutrition. Chrissie's systems medicine approach encompasses both cutting edge genomic technology and functional testing, offering the highest level of metabolic evolution, and lights a path for lifelong healing and wellness. Thank you for being here, Dr. Chrissie.

Chrissie Williamson: Thanks for having me.

Rebekah Kelley: So I want to just know, is the information from traditional medical testing sufficient for our good health?

Chrissie Williamson: Well, I think that's depending on what kind of condition you're trying to treat. If you are dying, then traditional medical testing is sufficient. And that's really what it's designed to do. If you go in and you have a heart attack, if you've broken your leg, if your appendix is rupturing, then traditional medical testing is quite effective and actually brilliant. We have amazing technology for all of the things that we need to do. We have Da Vinci [robotic surgery] technology, we have amazing, amazing medical technology.

But if we're looking at preventative medicine, then the lab ranges that we have when we're looking at the emergency care, are awful. You know, we really need a much tighter range to actually see the variations and, gosh, we're trending towards getting sick. And so that's why we have functional testing, where we look at things like metabolomics or some of our new omics technologies, which are pretty amazing.

And so, to answer your question, it depends on what you're looking at. You know, again, we have some amazing technology in terms of the medical world, but when we're looking at trying to prevent disease, there can be some other tests that we need to look at.

Rebekah Kelley: So, what are some of the benefits and limitations of... I'm sorry, can you explain the kind of testing you use in your approach? Because I know for me, I'm not as familiar with it because, of course I'm more familiar with going in to the doctor

and you get your traditional tests, but what would you be doing? If I came to see you, what would that be like? What would that experience be like?

Chrissie Williamson: Sure. So, we do use some traditional testing, but then we also use more specialized testing, as well. So, if we were to look at a cardiovascular panel, most doctors are going to run a basic lipid panel. So, cholesterol, your good cholesterol, your bad cholesterol, your triglycerides, that sort of thing. In addition to that, we would run a fractionated particle test. We're going to look at whether your good cholesterol is fat and fluffy, whether or not your bad cholesterol is hard and dense, and then we're going to run a bunch of inflammatory markers. We're going to be looking at a whole bunch of different things that go along with your type of condition.

And then we're going to be looking at something called metabolomics. And so these are these little biomarkers that help us determine whether or not your genes are expressing themselves. So of course at NGI, the Nutritional Genomics Institute, we're looking at your genome. But you know, it's important to understand that your genes, just because you have a genetic variation, doesn't mean that it's expressed. So we have created multi-system algorithms to determine whether or not your genes are expressing themselves, and have figured out whether or not, basically on these different biomarkers, whether or not a certain genetic defect or mutation or SNP – a single nucleotide polymorphism – is actually impaired. So we use specialized omics technology to be able to determine whether or not that gene is actually expressing itself. So we use everything from organic acids, amino acids, fatty acid testing, that sort of thing, stool testing, which is always fun – people are, like, where do I sign up for that? But you know, we use basically everything under the sun, in congruence with traditional medical testing, as well.

Rebekah Kelley: Now, is that the same as 23andMe then, whenever you're doing the genetic testing?

Chrissie Williamson: So I want to stress that 23andMe and other direct-to-consumer testing – that should really be used as a screening test. So, we do use direct-to-consumer testing at the Institute, but we use it for things that are non-diagnosable. So if you were looking at what kind of diet you should eat, should you be on a low oxalate diet? Should you be avoiding high histamine foods? What's your optimal sport performance, or that sort of thing... 23andMe and other direct-to-consumer testing, those types of things are absolutely fine. But let's just say that we run a diet panel and we find a SNP for celiac disease. We would not want to diagnose you based on that particular test. We would want to do something called molecular genetic testing. So that would be through Labcorp. You'd want to want to run that through your doctor's office.

So it's important to make sure that you understand the distinction between some of these SNP testing, and then actual molecular genetic testing. So it's important to make sure that, unless they're FDA cleared – which some of the 23andMe testing sessions are, which can be a little confusing – but a lot of the tests are not actually CLIA certified [Clinical Laboratory Improvement Amendments], which would in plain English, that's a government way to certify the safety of the lab or how efficient it is. But let's just say on one day you give a sample and you run the test. If you were to do it a week later, you might not get the same results. So, you know, this is something that you want to make sure that you're not basing any lifelong decisions on this particular topic.

Rebekah Kelley: Gotcha. So can you give us some examples of how genetic testing can help someone personalize one's health recommendations? That would be, maybe enhancing traditional, right? Cause it sounds to me like in a way you're offering something that's, like, optimizing, right? You're getting right into what we need to do to really be preventative, proactive, get ahead of something.

Chrissie Williamson: Of course. All right. So I always like to talk about myself. I'm always talking about these things. So, everybody's struggled with wanting to be on a diet at some point, or wanting to lose weight or something like that, and so I always joke – everybody always jokes at the practice – that if there's a weird gene or weird stuff, then Dr. Chrissie has it. And so I have this gene where basically, if I work out too much, then I get fat. Okay? So if I lift weights too much, then I get belly fat. Which...

Rebekah Kelley: That is cruel. That is cruel.

Chrissie Williamson: Isn't this wrong? This is so wrong. I basically, after I had my kids, I was in the gym, trying to work out and like, why am I still... what is happening here? And so, I ended up developing, we did optimal diet first, and then we did our lean panel. And then we did our sport panel, which is our exercise panel. And then we did our weight loss panel. And so, one of the things that happened when we did our sport panel is that I found it I have this gene, basically, the more I lifted weights, then the more belly fat I got. I thought, man, this is crazy! Basically, I'm designed to walk forever, which is kind of cool. I don't have to go slave at the gym anymore. But this is one of those things, it's not a diagnosable condition, it's not anything like that, but it helps me... you know, it was wonderful, that I didn't have to go work out so much anymore. But I learned what type of diet and exercise was right for MY body.

And so those are the types of things that you can learn by doing this type of genetic analysis. And there are all kinds of things that you can learn doing this type of thing. There are other things based on your cardiac risks, your insulin resistance risks, whether

or not you have a risk for diseases, those types of things. At the Institute, we have it broken down based on disease type, or panel, is what we call them. The fun stuff is basically what your optimal sport is, we have a compatibility panel, a dating panel, which is also really fun and interesting for those single people out there – whether or not your new boyfriend or spouse might leave the drawers open, or something like that. And you're like, I can't handle it, I'm going to walk away. [Both laugh] So all this is basically genetics and neurotransmitters. There's all kinds of fun stuff that you can learn about, based on genes. So yeah, there's all kinds of fun things that you can learn. Then we do... we have a lot of fun over at NGI.

Rebekah Kelley: Yes you do. [Both laugh]

Chrissie Williamson: Yes, we do.

Rebekah Kelley: Thank you so much, Dr. Williamson. Those are really valuable insights. Dr. Chrissie Williamson can be found at www.NutritionalGenomicsInstitute.com. Let me remind you to subscribe and get access to all Humanized videos, podcasts and transcriptions from all of our thought leaders on personalized health at HumanizedHealth.com.