Introduction to Reversing Diabetes and Heart Disease

Well. Hello, everybody. Welcome back to Reversing Heart Disease Naturally Summit. Although we're going to talk now mainly about reversing diabetes type 2.

And I've no doubt if you reverse diabetes type 2, you will reverse heart disease because the close nature of the two conditions go together. But we have a face You did not see last year, so be excited.

Get out your notebook, get out your pen or pencil and take some notes. And let's say hello to Dr. William Hsu So this is a very famous doctor and he deserves a big intro.

He spent 20 plus years at Harvard's Joslin Diabetes Center, a world renowned research center where he focused on all kinds of research on the path of physiology, of diabetes, led their international programs.

But he joined one of my favorite companies in the natural health world, L- Nutra, the makers of Prolon, the five day fasting mimicking diet. Everybody knows the amazing founder, Dr.

Valter Longo, and the great CEO, Dr. Joseph Antoun we interviewed last year. But Dr. Hsu has really been driving the use of L-Nutra's product line and the fasting mimicking diet for type 2 diabetes.

And we're going to go deep on this and learn a lot and understand that for many people, they're not stuck on those current doses of medication for life if they're willing to be open minded, innovative.

So, Dr. Hsu, thank you for being with us today. Dr. Kahn Thank you for inviting me that. Glad to be on your show. And I can't believe it's been since 2019 that you've been Chief Medical Officer of L-Nutra That time has flown by.

I remember when you were introduced and you were a big shot that and you're still a big shot. We like having big shots on this summit because it brings so much scientific authority.

Dr. Hsuu2019s Background at Joslin and L-Nutra

Just a little background when you were at Joslin and I know you still live in Boston and may have some ties to the Harvard system perhaps. But what kind of research were you doing on diabetes?

What was some of your more favorite projects? Well, couple of things. I mean, one is we try to really understand what are the root causes of type 2 diabetes.

And and on my angle was by looking at people who were not very overweight, believe it or not, there are actually quite a lot of people that don't look very overweight but actually develop type 2 diabetes and because a lot of times we need medicine, when you study the extreme or something that's different from the norm, you actually get to cover a lot of the the intricate backgrounds and the mechanism of actions.

So for example, if you look at populations living Asia Pacific, they don't look necessarily very overweight, but the rates of diabetes sky is sky high over there.

And so so even though people can have near normal BMI, but they kind of have high insulin resistance that's driving type 2 diabetes. So things of that sort.

And the second area that I was quite interested in is really in the area of digital health. This is now all before the pandemic. And how do we provide care in between?

The visits really was was one of my area of focus. Yes. I mean, we can have people go to expensive resorts and make lifestyle change. But for the majority, we're going to need to fill the gaps and keep them focused.

And that's excellent. And, you know, without too much detail, I mean, it's a big jump to leave the academic world of Joslin enjoying the scientific team at L-Nutra and obviously a very academic group at L-Nutra.

But not everybody would have taken the step. I mean, what attracted you to hang your hat with Dr. Longo and Dr. Antoun and the great team that's now centered out of Plano, Texas?

Yeah, well, certainly a lot of my colleagues were asking me that same question in the event my wife was questioning the sanity of my or my decision. But but I think in hindsight, it's been really a great journey as a as a clinician.

But that back four or five years ago, it was very clear to me that that the very reason why our patients with diabetes became a person with diabetes was because of their inability to adhere to a lifestyle that was difficult.

Right. So every day, eating, well, exercising, we all knew that it was it was the right thing to do. But it was so difficult for people. And if we were asking the people with diabetes to reverse their diabetes by using the same methods, by being by eating well every single day, by exercising well, in theory, that could work.

But but practically, it's still very challenging. It's almost nearly impossible for a patient now. That's why many of our patients resort to taking medications and taking injectables, because it's much easier.

The lifestyle it was that kind of almost a disillusionment, if you will, that I said we've got to look for something else that could give you the benefits of a drug like benefits, but it doesn't require an everyday adherence, everyday change in our lifestyle.

So I know that we are all big proponents of lifestyle changes, but in the back of my mind I always remember the patients that sit in front of me that struggle to adhere to what we tell them to eat, to exercise.

That's also for us. So when I stumble across the word by Professor Valter Longo in USC, it just opened my eyes to see, Wow, how could you have such an impactful results with such short intervention?

Why Fasting Mimicking Diets Appeal for Diabetes Care

And and that was what led me to L-Nutra So no regrets there. Well, you know, I would imagine most of the viewers of this reversing Heart Disease Summit are familiar with the idea that there has been a product available called Prolon, created by Dr.

Longo and made available through the L-Nutra corporate system that you open up. And it's the simplest program in the world for five days. You eat what's in box, one box to box three, box four, or box five.

And since the randomized study was published in 2017 showing multiple benefits, we won't go into detail here. This has been a program that I think over 100,000 people have used, but L-Nutra, we're not going to use the word Prolon anymore because L-Nutra has developed a slight variation specifically for type 2 diabetics.

And you published this study. Tell us a little bit about the Journal of Clinical Endocrinology and Metabolism July 2022 and what you observed in people that did this slight modified five day fasting mimicking program and why people listening should be excited that they may be able to get off the endless treadmill of more diabetic drugs or more diabetic drugs.

Yeah. Dr. Kahn, that this study you cited was it was in fact, it was revolutionary because in the study, the study was actually done at University of Heidelberg in Germany involving two teams of individuals, one taking five days of what we call fasting, mimicking diet or the FMD for sure.

That's the invention by Valter Longo. Just five days per month, you repeat, is six months. So you're talking about a 30 day effort, five times 6:30 compared to another group of individuals that were simply on regular standard therapy with no particular dietary sort of participation.

And at the end of six months, we saw a couple really amazing results. Number one, the group that were on the FMD, the five day efforts, they lowered their intensity by 1.4.

Now, 1.4 might seem like it's respectable, but it's not five is not three. Right. But it's actually very, very important. 1.4% just for every percent dropping in.

Once you're talking about 30% reduction in long term complications. So they're long it's it's almost comparable, right, to some of the best drugs in the world.

However, two thirds of the people who are on this five day FMD, they actually lower their medications. There are some of them even stop taking medicine.

So so you may not appreciate this so many of the of the audience right here. But to lower A1C that's a third month three months a glucose average. Right it's a marker for diabetes control with more medicine is very commonly seen, but to drive a drop in A1C at the same time lowering medication.

Now that's impressive, right, because it works through a different mechanism, but in addition also we saw at about 22 pounds weight loss and the amount of weight loss and.

Just say that loud one more time please It was 22 pound of weight loss and most of them were fat loss with preservation of lean body mass. That is actually astounding because a lot of our listeners may not realize this.

When you lose weight, you lose much of their weight in the form of muscle.

Study Results: Lower A1C, Medications, and Weight

So for example, a lot of the the popular drugs like Ozempic and others, when you lose 1 pound 30% of that weight is probably muscle weight. But because of fasting in the the FMD was through a different mechanism.

People lost the way they that they don't want. They kept the muscle they had. And so that was actually a really great study. With 30 days of effort, you had the weight loss, you preserve lean body mass, you lower your medications and you lower your A1C That.

Was remarkable. So maybe you start the program with a hemoglobin A1 C of 6.8% and of course, it's just average for the group. And six months later, with 30 days of effort and hopefully eating well, the other days, of course, you're down from 6.8 to 5.4.

That would be a 1.4% drop if my math is right. And so you actually would be in the normal range at that point, maybe on some medication, but you've gone from diabetes type two by definition to normal blood sugar control.

By definition. It's really interesting because about about a year and half years ago, a number of US associations like the American Diabetes Association and again Society got together and said, hey, you know, for a long time we just wanted to sugar to to to get to a good level like let's say it was less than seven, but that really translating to a lifelong disease management meaning that we just expect our patients to live with this disease with multiple drugs for the rest of their lives.

But since this this consensus paper was published my in about two years ago, these organizations got together and say we ought to have a different goal, a different new angle.

And that is, instead of driving just lifelong dependance on medicine, we should begin to define what diabetes remission is. Right? We should put an end to this this lifelong dependance on medicine.

And so from there on, there was this idea that, hey, we should drive, we should try to help patients get rid of their drugs. We should try to help them reduce the burden of medicine.

And this is what we're driving for, lowering the agency at the same time, get people off their medicine. I think that ought to be the new angle. And, you know, I wonder how many doctors or how many of your doctors, your listeners doctors have told them that they could possibly achieve this.

Right. They don't have to live with diabetes for the rest of their lives. They're actually means of ways to achieve diabetes remission. Wow. It's amazing, actually, if everybody I just everybody write this down.

The average weight loss was £22. Nobody's guaranteeing it. But that was the average. The average reduction in medicine was that two thirds of the participants could reduce in some eliminate diabetic medicines and the hemoglobin one C average drop was 1.4%.

Quite remarkable. And then rather than just sit on an academic achievement, you guys developed a program a little bit of a long name DRP, diabetes, remission and regression program.

It's been a real brainstorming session to come up with something like that. But this is available and I can tell everybody it's available because in my own clinic I've been able to offer it to type two diabetics and they've made a decision to get involved.

And it's not clinical research anymore. It's just a nutritional program that they can participate with. But tell us, for those that are listening, you know, what are the participants that were out of the research phase when to make it available to the public phase?

What's going to happen to them if they say, I want to try that for the next six months? Yeah, this program is really for people who said, I'm sick and tired of taking all these medicine and I want to feel normal again.

I don't want to be taking medication for the rest of my lives. So if you're somebody with type two diabetes, enroll in the program. This is what you would expect.

You will expect. A dietitian that will hold your hand throughout this journey is there's a six months of monthly FMD, five days of this fasting mimicking diet for the rest, 25 days the dietitian will be by your side that will provide nutrition, counseling.

We hope that we can help you, even though the five data along, it's powerful. But look at the combination of the five day plus the dieticians really giving you personalized guidance for the rest of the 25 days.

That's really the that they make up there. You know, because of the as we talked about in the program, it took about six months to reduce the medications.

We give patients the option to extend it to a 12 month program. Right. So that you could even when you were off the medicine, when you're completely down to just lifestyle alone, we're still there to help you.

But people have choices, too, to finish the program with the Constitution of their doctor and their dietician, the dietician that we provide to start the program any time along the journey.

It's plan based five day FMD. Is dieticians supporting you. It's smart scale that will give it to you, that will tell us your anthropometric, your changes in your body, fat and muscles.

It's a library of contents. There is an app to support you.

Diabetes Remission and the New Treatment Goal

There's even ten days of a simple meals from our sister company, Nutrition for Longevity, that provides medically

tailored meals. That shows you what the 25 days of diary should look like.

So it's really a well thought out, full fledged program for you. That's a remarkable wrap around trying to maximize the chance of people listening and they know type 2 diabetics, their type two diabetics, everybody knows somebody with the explosion of unfortunately, type 2 diabetes that we've seen in the last couple of decades.

Somebody knows somebody that's going to benefit from this program but has not heard about it. And the fact that it comes even with some samples of this wonderful food by this company, longevity for nutritional longevity. Yeah.

And is it for longevity that would make more sense, right? A wonderful company and I've eaten their food. It comes right to your doorstep and get you started along the right way because of course you want to you know, between the monthly five day periods, you want to also focus on a healthy whole food diet and they teach you how to do that.

And there's an app that guides you right on your phone. That's right. There's an app. And then there is definitely we will also provide the longevity diet book side by the very inventor of the of the program Voltaire longer.

So it's we have sort of every way to support the patients. So the key is that you don't feel alone during this journey and because the product doesn't work.

And so we're going to need to work either with your own dietary in this case. Dr. Conrad So in and with regards to your patients to reduce and de-escalate those medicines along the way.

But if you don't have a doctor that's working with you on this, we now also have ways to to arrange for a medical supervision of a physician that will lower the medication for you if you so choose not to work with.

Oh, that's new. That's new. And that's great because, you know, during the five days that people are using the L-Nutra program, it's reduced calories.

And we very often are counseling them to cut back on their long acting insulin and reduce their oral agents for those five days. And it takes a little expertize.

So the fact that you have some that expertize internally is going to make this even a more available and successful program for many people. So tell those that are listening, if they want to find out more, where would be the best place to go to?

So L-Nutra is the mother company and so if you go l dash neutra at the word health at the end, that's where you will find the information that's neutral health outcomes.

It's a little bit of a mouthful, but if you understand that kind of the spirit l dash Neutra has always been the mother mothership, the company and adding their health really differentiates from sort of our consumer offering because this is a health care program, this is a medical program.

So you can find us at L dash and Utah health. Com okay. That's clear cut L-Nutrahealth.com and read about it and sign up for it.

How the Diabetes Remission Program Works

I mean you know, if you're not a type two diabetic, of course there's people on the five day fasting mimicking diet that's suitable for most people. There's a few exclusionary criteria, even though it's a food program, but there's a few people that may not be ideal for it.

The majority are. And of course, this program is specifically for type 2 diabetes, not type one. There is ongoing research there, but that's what we're talking about.

So I think we've learned a lot. And just before we go to a quick break, tell us, you know, you're vast experience why putting type two diabetes into remission, putting type two diabetes into a regressive mode, dropping hemoglobin A1, see, what's that going to do to cardiac risk?

Yeah, it's as a doctor can you always say is right the diabetes is really a vascular disease. The all the complications of diabetes really ends up being vascular.

And that's why you said at the beginning of the program really these two disease states are tired, the hips. Right. So that's why we have a term called cardio metabolic.

When you lower the ANC, when you really treat the cause of root cause of type 2 diabetes, when you reverse type 2 diabetes, you're very much re reversing these risk factors for heart disease.

You're reversing these risk factors for these vascular conditions. And and for example, the vascular conditions in the eyes is called retinopathy, in the nerves is called neuropathy, in the kidneys, called nephropathy.

These are all vascular, these are blood vessel disease due to height. You know, constantly having this high level blood glucose, you do yourself a favor by reducing the disease burden, by reducing even the side effect of medicine through this program.

I think lowering the agency, lowering the medications, really treating the root cause of type two diabetes. This got the best thing that you can do for yourself to for it to support a healthy longevity and to reduce all these complications.

So talk a little bit. I mean, insulin resistance. What do you think's happening over the course of the six months in these people? They're all the eating the L-Nutra program, you know, five days, 12% of the time.

I'm not sure my math is right. I mean, what do you think's causing some of these, you know, really, really significant, beneficial impact. And you can go as scientific as you want.

Yeah, this is really a good questions because, I mean, how could five days of nutrition intervention change so much? I think the answer really lies in that this is a very systemic sort of intervention.

This has a very, what we call upstream effect, also very systemic impact. Let me give you one example, because it's really hard to understand, right? If you exercise, that's one intervention that's lifestyle based.

How is it possible that it is strengthens the muscle, lowers the fat, increases the strength of your heart, increase it, expands the lung capacity, also even good for your mental health.

Cardiovascular Benefits and Insulin Resistance

Think about that one intervention. The second about another really powerful lifestyle intervention. Sleep when you don't sleep, every system, organ and organ systems fails.

Right. I remember during the day days that kind of of our residency and training, we work hundred hours a week. Our brain wasn't working, our muscle coordination was much lower.

Everything was in shamble, fasting for five days. Does that same thing right. It's very systemic because that the stress of fasting affects every cells in the body.

The cells have to survive. So the heart cells, the brain cells, the muscle cells, the fat cells, everything goes through these, cleaned up these changes.

And that's why specifically when you look at what happens to mainstream resistance in the study that I quoted earlier, we had a 60% reduction in the resistance just by five days of fasting, mimicking in six months cycles.

And so not only does it address a lot of the basic fundamental pathophysiology of type two diabetes like illness and resistance, but it also has this systemic impact almost working in the liver, for example, on the muscle, on the fat, on the even potentially in the beta cells.

That's the very cells that make insulin themselves. So it has this overarching arching impact on systemic health. And it truly is is one of the the major changes that brings about major changes to the body, much like exercise, much like sleep is it's really a very powerful lifestyle intervention.

Well, can you separate can weight loss of any source at a £22 weight loss over six months with, God forbid, a carnivore diet or a high fat animal based ketogenic guy?

Do you do you would you know, I don't want anybody to do that. I'm asking a scientific question of a leading scientist in the world of diabetes. Do you think it would have resulted in the same 60% improvement in insulin resistance or not necessarily?

Not necessarily. Well, for for a couple of reasons. One, you would have to be on six months of every day adherence to that ketogenic diet. Right. So that is very different.

Six times thirties, there's 180 days of commitment versus five days per month. So from every perspective is different. Number two, this is a plant based approach.

Think about like there's nothing animal origin in the composition, FMD, very different composition. And I'll be asking the cardiologist, you know, in terms of its impact on cardiovascular and heart health.

Right. And number three, I think the mechanism of action is really very different. While the ketogenic diet, a carnivore type of diet, relies on ketones to generate the benefits in the case of a fasting mimicking diet, the ketone is really a beneficial side product, a byproduct of the fasting process.

It's not what really changes the cells inside out. What changes the cells inside out is the process called autophagy, right? That's the basis of 2016 Nobel Prize signs.

When the cells doesn't see enough nutrients for a long enough time, it begins to digest part of the cells that seeking new source of energy to depend on for the next couple of days until the food becomes available again.

This is what with every living organism seizing nature. When nature from time to time gives us periods where there's no food, the cells have to survive.

So it's like cutting your own arm in order to survive a times of crises, the cell, the cells go into these existential crisis mode, right?

Mechanism of Action: Fasting, Autophagy, and Plant-Based Nutrition

Doing these prolonged fasting and the cells shrink during that period of time, hoping to to survive, to get by, by getting rid of the more dysfunctional components of the cellular organelles to survive.

But when time becomes plenty again, when food gets revealed available again, the cells actually grow back. Now, when they grow back, that's when they have replaced a lot of the worn out parts with new parts.

Just think about the disadvantages of nature. You know, when when it has the hands down to when it handed down to us as a threat to our existence. The cells adapted by by converting that disadvantage into advantage, by making new cell parts and cellular rejuvenation.

This is really the miracle of life without this kind of mechanism living organism can never have a sense of survival over hundreds of millions of years of existence.

This is really the miracle of life and we are banking on that because this process. So one the the the scientist that described this won the Nobel Prize in 2016.

So here with the fasting mimicking the FMD, we're really just leveraging what nature has already designed. But in a controlled way, we mimic the fasting.

You don't go through the the suffering and the pain of a five day. We're only fast by giving you nutrition, right? That doesn't trigger the body is a knowledge of these nutrients in the body.

So you get the benefits of a five day fast in the story is just really an amazing story, Dr. Kahn Wow. It is. It is. And you know, we haven't even mentioned the fact that it is a plant based program.

It has now, you know, years of research behind it. We know that it's likely very good for the cardiovascular system. We don't have to worry about the negative impacts of a daily ketogenic or carnivore diet on negatively impacting the cardiovascular system and with all the other just before we leave, just tease us with some of the ongoing research projects within the L-Nutra umbrella.

I think there's an Alzheimer's study we're kind of waiting for. That's one of them. Well, and we published that early in the year in the animal model with pilot human data and more recently we just our our most recent paper actually show again, this is not a claim of promotion of the product because it has to be in the context of program.

But Dr.

Ongoing Research and Closing Remarks

Kahn I mean, most recently there was a paper that looked at triple negative breast cancer and and how the addition of FMD to the standard of care chemotherapy actually almost double overall survival and into almost 30 plus months versus 17 months.

I mean, this was the overall study was just amazing. So we look to expand upon that because fasting is not only good for metabolism, but potentially has a place in our fight against our mortal enemy, which is really a cancer.

And you have more to come. But we never stop doing research in L-Nutra Absolutely incredible and exciting and the future is so bright. So thank you for taking time.

Everybody learned a lot. Everybody can go over to L-Nutrahealth.com and learn more about the diabetes regression program. Sign up. The patients for my clinic that have signed up have done exceedingly well.

They're about halfway through their year and they're looking forward to the rest of the year. And we're just so grateful. Companies like you and leaders like you are doing this.

So thanks again. Thank you, Dr. Kahn, for having me.