## Introduction and Guest Background

I'm your host, Doctor Jeffrey Gladden. And as usual, we're here discussing leveraging AI to outlive disease and living for a lifetime. And today, my guest is the distinguished doctor Joseph Anton.

His passion is to enhance human longevity. And he's known as a CEO of longevity, having led the first longevity company, Neutra Incorporated. They do successful science and receive many patents and have launched multiple longevity products.

He's the CEO and chairman of the board of L neutral and a unique nutritional has which has a unique nutritional technology company. Now let me let's start over.

He's the CEO and chairman of the board of L Neutral Incorporated, which is a unique nutritional technology company leading the longevity and food as medicine markets.

So, Doctor Antoine Joseph, good to see you or. Yeah, it's good to see you again. Thank you, Doctor Gladden. I think, hopefully we're going to change somebody's life today.

Oh, good. I love that. Let's change everybody's life. So that's great. So tell us a little bit about how you got into this. What drew you into this space?

Yeah, I, I started, my career as a physician, and I wanted to be an MD. PhD. I wanted to be a doctor that cured this patient of chronic conditions. When I hit the.

When I hit the market, as they say, the same thing happened to you. At some point, we just figured out that we've been trained to meet people after they're sick.

So we're practicing. We were practicing seeking out health care. And this this relates to the concept of we want health spend, not just stick longevity. Yeah.

And then we were just giving everyone 4 or 5 pills that they have to take for the rest of their lives. And I, I rebelled against the system. I left the system.

And and then I did my studies in health policy and public health. I've been in Hopkins. I thought I'll do preventative policy advocacy.

## Aging, Biological Age, and Nutrition

And, and. That's its own quagmire, quite honestly. Yeah. You're right. It really is its own quagmire because it's so linked to the underlying sick care system that is the.

Yeah, actually. Move the needle. Yeah. And I, and I advised so many, you know, actually many ministries of health around the world on prevention and how to change policy and system reform.

But it goes back to the problem with prevention is a lot of it is things that people know. They know already you they know you shouldn't that smoke. They you know, you should eat healthy.

You they know you should exercise. And the problem is in the moment there's a competition between I have a burger, I have a product, I have a burger in front of me versus exercising late night.

I can do my pop chord or I can go exercising. So you competing. It's your long term knowledge competing with the

short term pleasure of product. And this is why we keep losing that war.

So then I said, okay, now when I go and develop a product that competes with the bad products today, a product that prevention and longevity. And so I worked a little bit I you know the doctor would have policy knowledge.

I didn't have the business knowledge or product development knowledge. So I joined Lily the today the biggest biotech in the world. I learned sales and marketing and product development there, ended up having international business development, for the emerging markets.

And this is what I left. And I started my journey on finding a product that could be a product of longevity. And two things change. Two, learnings change my life after that.

The first one is, is I never had been taught in medicine to look at chronic conditions. You know, 90% of us will die out of four conditions diabetes, cancer, cardiovascular and Alzheimer's.

Right? So 90% of us. And we we've been we they never taught us in medicine that those are actually age related. Aging is the mother of all these condition right.

So genetics predisposition. But that's like 510% like you're it's age related. You're not going to get all them at age 27. Even if you have the aging.

And they're going to get your first heart attack at age 23. Even if you have free dispositions, you're going to get them with aging. So the notion of aging is the mother of all these years.

And there was an article at that time by Walter Long that called Treat aging. Right. That was a shocker in nature. And so, so I, I came to learn that the biological age of the body is such an important notion and maybe should be the unit of measurement of health.

I think so in this current day of chronic disease and that acute disease, the age of measurement of health should be the biological age. Yeah. I would just add this, that, you know, what we find is that we're all a mosaic of many, many, many, many, many biological ages.

And just so you to understand, there isn't one metric that you can go to measure and say, oh, I've got my biological age because we find people that are 30 year old in one category and, you know, they may be 40 years younger in one category.

In ten years old in another. So and every organ is going to have its own age. Right? Exactly. If he abused the, if he abuse delivered with alcohol and and some cirrhosis, some fat is going to have a different age than whatever your muscle.

If you were drinking in an athlete you're going to have differential bio age. So that's right. It's a complicated matter. But you know where there I am.

And I know we're going to figure it out soon. A average of averages or a support or a distinguished measurement to at least say hey on average this is how this is what your bio age.

But let's dig deeper. I think your liver is tracking behind the. Let's work. On that. Exactly, exactly. Yeah, I think they're really only as young as your oldest age in a sense.

Right. Because I think that's going to bring you down or get you closest to it. So yeah, unless unless it doesn't kill you, unless that organ wouldn't kill you, so would it.

You know, it's unless it's not an essential organ or, but the second thing that I learned, which is really changed my life after aging, is the impact of nutrition.

Right? You know, when you and I went to med school, I mean, I've done I've done whatever 15 years between M. D., Ph. D. and two masters. And I got one session on nutrition and nutrition is the only product we consume every day of our lives, 3 to 5 times per day, every day.

Well, it's it's more powerful than any pill it could be. It could be more powerful than any poison, which is what's happening to us in the US. Yeah. And it could be more powerful than any pill we could take today.

It's it's it works on every piece of the body.

## Designing Longevity Nutrition Products

Microbiome absorption, blood epigenetic reading. I mean, it is a major. And for us nutrition was just weight loss. Weight gain. And then I kind of got that moment that if we tailor nutrition for longevity, not just for weight gain or weight loss and that can be one of the most powerful interventions we can do the human body.

So tell us, tell us what your insights were into actually tailoring, you know, nutrition for longevity because we know about weight gain and weight loss.

We know about muscle mass, we know about anti-inflammatory diets, and we know about, you know, trying to optimize the gut biome per se. But I, I sense that and, you know, manage metabolic disease, but I sense that you're that you're looking deeper than that.

Definitely. We're looking at formulations that basically and that's a bold statement. Every time we eat we age a little bit. Every time we eat carbs and insulin increase.

And so there's a growth factor. It's by a growth factor. Every time we eat proteins insulin like growth factor increase IGF. It's another it's called insulin.

Much better than the carbs. The the important it's called insulin. Like that's right. People miss this all the time. They miss this all the time. It's like, oh, I want to be on a high protein diet.

It's like really, really. That's really what you want. You want to be activating mTOR all the time. That's really what you're feeling it. If you want to die sooner, that's that's a good.

Way to do it. Yeah. Yeah. So every time we age we eat, we age. Right. And we know that because most centenarians that live under and beyond and calorie restriction, you know, have a certain type of chemistry.

So we know that kind of restriction and it's very well published is one of the ways to live longer. Right. Yeah. So the the company that I lead today a neutral longevity through nutrition, our goal is to nourish you, to swap your nutrition with the new formulations that are healthy, plant based.

We're talking about non-GMO plant based. I'm not we're not talking about anything artificial. But how can we combine ingredients that do not spike insulin, that do not spike IGF so that you don't have to calorie restriction?

You can eat normal, but you're getting the effect of calories by not spiking insulin. And if so, what? What did you come forward with? Are these like meals that you developed or are they supplements or how is this work?

So I'll give you I'll give you a few examples. And and people can, can find those that you know, proline is the is the name of the entity that that in our company produces the consumer products, the consumer nutrition products for longevity.

You have another medical entity that produces food as food as medicine. So food for longevity, nutrition for longevity is called proline. And we have, a five day nutrition that actually reverse the bio age of the body.

We call the problem five day fasting nutrition. We uncover that fasting is one of the ways, if you simulate fasting,

the body thinks that there's no insulin, no IGF.

So you're going all the way backwards in the bio age. And we develop smaller millet based on products, that actually you can consume. And that spike is, you know, IGF. I'll give you examples.

So the longevity protein is one of the products that I'm very passionate about. It's called l dash protein, on the L drink is a formulation that we studied over three years, $5 million.

And we have two patents on. And it's basically we looked at sequences of amino acids that when put together they spike IGF the least. So we know that meat spikes IGF the most chicken eggs.

Fish plant based is the least plan B source of protein. We create a subcategory of plant based where we figured out within that category what is actually going to spike IGF the least.

And the formulation does not spike insulin also as high. So you're eating a shake. It's a protein shake. And it has 25g of proteins 21 minerals and vitamins, all from vegan sources, all from fruits and vegetable.

And it has extra virgin olive oil. It's a medium longevity almost meal, almost a mini meal where you get your proteins, you get your virgin olive oil, you get your minerals and vitamins, and.

Then you do you have a feeling how much of the protein consumed actually goes into actually making proteins in the body, because there's a big differential between proteins in terms of their ability to actually result in protein, formation in the body, a lot of protein gets turned into carbs, obviously.

Right. So I mean, even egg whites, you know, only about 49% of an egg white, which is pure albumin or the most biologically complete protein, only about 49% of that goes into actually building proteins in the body.

Right. And so this 22%. Right. So yeah, that's true. But what you want is the exogenous sources. You don't want this to spiked on top of what your body is converting and or saving and or producing.

Right. So the goal is you don't want to add on top. So what we did Doctor Glennon and this is to me this is as big as the cholesterol discovery. Right.

We you're going cholesterol. You say okay that's your optimal zone of HDL. And yeah we we discovered we did a big meta analysis on all the articles on IGF and where IGF optimally should be, it should be between 100 and 4160.

If you go below, say you're vegan for a long period and you're not getting enough proteins, you're losing muscle because there's a balance. You don't want to just decrease because there's about.

So especially around that age 65 and above. So if you go below 140, we ask you to supplement your meals with the L protein, because then you're bringing 25g of vegan sources to compensate for that muscle.

If you're above 160, say you're eat a lot of meat or a lot of protein per day. Yes, you're nourishing your muscle, but you're overpaying the price of accelerating your longevity.

So 140 to 160. And we believe this should be a really readily available for all doctors and consumer measurement.

## Fasting Mimicking Diet and Bio-Age Reversal

Because IGF and this is where the, the lobbying of the protein industry have kept this secret to more to get proteins the faster you age. It kept that secret away so that we don't measure it.

We're all obsessed with carbs and insulin and diabetes. I called it today the diabetes, a protein where over consuming proteins that were aging faster and therefore were developing cancer faster, etc..

Yeah. That's fascinating. I mean, we measure IGF one to all our clients. Basically it comes with, with our hormone panel. So we get an idea of one on every single person so we can see exactly where they're at. And to your point, some people are low and some people are high.

But, being able to dial that in this idea that biology is this economy of balance, right? And you don't want to be you don't want to, you don't want to to me also, you don't want to be kind of, in one position all the time, like you want to actually oscillate between activating them to, okay, let's eat, let's be fed, let's build, let's do that.

But then let's fast and let's activate Ampk and let's activate autophagy and all the other things. Right? So it's just it's a cyclical almost sine kind of approaches 100%.

And we see that even in exercise. Right. Yeah. You want it to be intense intensive exercises like the cycling of a fasting and and and then the, the chronic exercise or the everyday movement is like, you know, maintaining good balance of carbs and protein, therefore insulin IGF.

That's right. And this is life. There's day, there's night, there's winter, there's spring, there's summer. So there's the down periods and ups here. Period.

And we rejuvenate. The more we stress induces. The rejuvenation is why we love the fasting and the fasting mimicking portion that we talked about prolonged.

And this is one of the most proven ways to reverse the bio age of the of the by the way, core of the body. And then we have those other products. I mentioned the protein to slow down the aging.

We have the spread again, 74%. And it's a, it's a chocolate spread that doesn't have the butter, doesn't have all the best stuff about chocolate is great.

I will say it tastes great. I've had the I've had the chocolate spread is great. Yeah. But my biggest lesson being, coming from medicine to nutrition, my biggest discovery, Doctor Gladden, is that number one healthy food, kid taste even better than 100%.

Other person is. It's expensive. Right. So the business of nutrition to save money, they want us to eat the cheap fat they want. If they want us to, they want to fry the or the fries in the same oil 20 times, right, boys?

Tastes good, but they save money doing that. If you give somebody our else bread, which most of the oil sauces come from, almonds from a million mountains of it tastes even better than any tell this better than the peanut butter, but it's more expensive.

But it's still right. But it tastes better. Same thing. I mean, in a healthy fats, the most expensive. A lot of our products, we include macadamia in them.

The fasting bar you asked me, for example, we have the fasting butter in the morning to replace breakfast and that spike insulin IGF in the morning. A lot of it is macadamia.

It costs us to produce clean our products to to see what other companies would do. But some in this, in this, in this economy, we're still cheap. And I think you can go and buy.

But most things that you can go and buy, right. So. What's great. The second learning since we're talking nutrition, longevity, going back to the protein is that, Doctor Gladden in the US, if you have an ingredient that's below 2% of your label, you don't need to declare it.

That's correct. So when I went to produce the longevity protein, I had to delay production by 16 month because we couldn't find any producer in the United States that would not add 2 or 3 ingredients to the protein, to cheapen the production cycle and to ease the circulation within their machines.

This is silica and other products, right? And we had to partner with one. We had to invest more money and change the production cycle to produce a clean no additives, no preservative that are declared or none declared.

So this is one of the cleanest protein that any doctor can prescribe. It's all plant based and it's a longevity. So we're very OCD about ingredients and source of ingredients manufacturing.

And then the longevity formulation. So where do the ingredient come from. How do we make some of the longevity formulation sourcing. And then and then the formulation the production all has to be clean for us to be to be happy with it.

I think it's one of the biggest challenges for anybody that's interested in nutrition is to really get Ahold of clean, nutrient dense food. I mean, it's one of the biggest challenges.

It's almost impossible. So they always ask me why it takes you 2 to 3, 2 to 3 years to launch a product is because it just and I hear it every all the time, right?

People eat in the US, they quickly gain weight. They gut health is bad. You go to Europe, you go to somewhere else where it's more and they eat the same quantity the same, and they feel better.

Right? Because we're, we're we're adding we're we're processing our food even though they tell you it's not processed. There's no additives. They can hide it. Right.

And they were telling me the suppliers were they don't worry. You don't need to declare in the. US it's so backwards. It's so backwards because you've got, you know, you've got big pharma, you've got big food, you've got big farming, you know, and they're all kind of somehow playing off each other.

I just read an article the other day you'll find interesting and that is that, you know, you've probably heard about regenerative farming. They were looking at, this was I forget which university was doing the study.

Might have been in the Midwest, but, they actually looked at soil that was being fertilized with natural fertilizers like compost and manure and things like that.

And it was in a no till kind of, growth cycle. Right. So they weren't tilling the soil and destroying all the, all the nutrients. Right? They weren't using any other fertilizers.

What they found was that, of course, the food was much more nutrient dense. But the other interesting thing is that that soil would fix much more CO2 out of the air than tilled soil.

So not only when you're when you if you if you're as a consumer, if you want to, if you really want to get serious about this, using these products is great.

But then also sourcing, you know, foods that are grown on these regenerative farms where it's incredibly nutrient dense and you're actually helping the planet by fixing more CO2 in the soil, right?

It sounds like that the source of some of your stuff as well, which is like amazing. So that's great. And this is why we also and by not including meat as well, because the second biggest polluter between first and second is the cattle.

That's all the same thing. It's cars more than cars more than industrialized. That's right. So go with more. Antibiotic use is in the is in the livestock too. Right.

So yeah. Yeah. So to conclude the products and the and how we slow down aging, you know obviously our, our Rolls-Royce's of our pipeline is the is the roll on five day fasting nutrition for those who don't know prolonged five day fasting mimicking diet.

It's, we just started our 41st clinical trial on it, and I saw it the most scientifically tested longevity products, over 40 clinical trials now over 200 patents.

And it's the only product tested today to give you a rejuvenation and autophagy on the cells. That is very intensive. After day three. We haven't published that paper yet, but we just got the results.

And there's a very high spike of rejuvenation happening after days of fasting. It's a product that merges, rejuvenate the cells, improve and reset your metabolism together.

That's what we love. We love it for longevity. Many people have heard about, the longevity Olympics and the fact that they're measuring they're measuring the problem with the longevity.

The good thing about the Longevity Olympics is that they're bringing notoriety to the idea of longevity. Right? And lifestyle changes.

## Diabetes Reversal and Future Plans

The trouble with this? They're only looking at one metric, and they should be looking at 60 different metrics, but they're looking at one. Okay. Well we'll take the one.

So the one is they're looking at the rate of aging, which comes out of a trial from New Zealand, out of a town over there called Dunedin Pace. And I will say that one of the beautiful things about the five day fast mimicking diet is this one of the fastest ways to actually slow your rate of aging is to go through that process if you want to.

If you want to post something on the longevity Olympics, do the five day fast mimicking diet. And it's really amazingly quick how you're how you. Yeah, I watch the Olympics and I'm among the top I don't want to name, but let me say the top in the world, you know, they'd say they reverse said bio age.

I know ten of them have done Prolog. That's right. Okay. So they they they don't announce it there. But but I know and I know them personally. Right. And I know they've done prolog. So and there's a paper in nature.

So nature is the number one citizen of the world. There's a paper that we published six months ago showing that if you do three cycles of Prolog, the problem is just five days, right?

So if you do five days month, one five day months, two five days a month, really do reverse in your bio age score by 2.5 years. I mean, that's that's big.

And if you do it between age 50 and 70 and is what we recommend the most, this is the pre disease to disease aging rate. And this is where women are crossing menopause where men start getting that acute, you know setting of heart attacks etc.

between age 50 and 70 if you do it three times per year. The model, it's a model that simulates, you know, the biological reverse. So it shows that you gained 1.11, sorry, 11.5 years of bio age reversal, three times per year, over 20 years between 50 and 70.

Yeah. No it's impressive. Very very impressive. Yeah. And as you said it's really well studied. If you haven't tried it and you're listening to this you could go to prolong and actually and actually try it, I think, you know, we use it all the time for lots of different reasons.

One is to reverse bio age, but it also is fantastic for sort of if someone's trying to lose weight, it'll reset their taste buds, it'll it'll reset their gut biome.

A lot of the appetite that you have late at night is your gut biome. You know, telling you to go eat ice cream, right? So you can reset all these different parameters.

It's not. So you're actually improving the longevity metrics, but you're also changing your whole, eco system inside your body to actually live a more healthy, life, if you will, after the the five day advanced mimicking diets done.

And it also improves insulin resistance. And there's many studies about this. It's really quite fascinating. So yeah, we have and we have two clinical trials showing the remission and regression with diabetic patients.

So prediabetes diabetes right. We actually just launched our diabetes program. And we're showing that people can get rid of decrease the dose or get it off a full medication every six months, every six months.

So for the first time diabetes is becoming a regressive disease. You and I have been taught it's a progressive disease. That's right. And we keep piling pills after pills after pills with the fasting mimicking diet we're seeing the opposite.

We're seeing regression and two thirds of the patients. Yeah I love it. Well we're so grateful for the work that you've done and the work that you're doing and what's what's next for you.

What's the next thing on your agenda? I think we just launched diabetes. I'm so by so so proline and the longevity products they're they're doing amazing.

We have over a million plus consumer and it's growing. I really hope people will try those especially the five day or the longevity protein or the fasting bar.

On the medical side, we you know, the medical trials, they take longer. So we published just recently in diabetes. So we went to the market with it. We have the data from the first 400 patients and it's amazing.

Two thirds of them, as I mentioned, will drop their medication or the dose within six month. Yeah. So my biggest passion now is to reverse diabetes across the world with the proper fasting, nutrition people misunderstood and especially us as doctors, we misunderstood diabetes.

We thought it was just, you know, you accumulate fat, it becomes insulin resistance, you become diabetic. Well, you if even if you do that at age 22, you're not going to become diabetic, right?

Then with type two, what's happening is, yes, there's insulin resistance and weight, but there's aging and there's muscle loss with aging. And when that really happens, the fat and the resistance and aging and muscle loss, this is when diabetes started to happen.

And with the fasting, mimicking diet is the only intervention. It works on all three of them, like the guilty ones, the diabetes treatments, the weight loss they work on the inside, the resistance, that rejuvenating the cells and protecting body mass.

Why do you lose weight? Is, is a fasting mimicking by putting the money intervention? That's right. We've even seen beta cells come back. For example, we do two hour glucose tolerance tests on everybody, right.

So you can map their insulin response. You can do a stress test on the pancreas and see exactly where they are. They you have a great hemoglobin A1, C and fasting blood sugar.

They may still have significant insulin resistance. And you can see that reverse completely. Or you can even see somebody that couldn't mount, very much insulin response to the challenge.

Right. Because they've actually become type two diabetic, you'll see their insulin response is increased significantly. So it's almost like you're rejuvenating the beta cells, which, you know, we know is kind of the holy grail of trying to reverse diabetes.

So yeah, we have the proof in mice. We destroy their pancreas. And what is it we need the pancreas to reproduce insulin to know we published that. And so, yeah, we're, we're we're trying to raise some funds.

They'll get a grant to do it. And humans and Harvard is ready. Harvard has suggested a full trial for us to show a rejuvenation. We're just, a little bit trying to to ration how we spend the money.

Between all the trials and all the discoveries, we're the first through ethical nutrition technology company doing clinical trials before we put any product in the market and the costs.

But it's, it's worth it. Beautiful. Well, Doctor Johnson, thank you again for taking the time to speak with us. Really, congratulations on all you're doing.

We love the work. So thank you, doctor Glenn. Thank you for hosting me. Yeah.