Introduction to Food as Medicine

Discussion around food is medicine is nothing new. But the fact of the matter is, one apple doesn't necessarily mean that all apples are the same. Just because they have the same nutritional content doesn't mean that the soil they grow are from the same areas.

And believe it or not, the organisms in the soil and the earth and the minerals have a huge implication in health that goes far deeper than we ever expected.

And it's no one's better to talk about this than my good friend Jennifer Maynard, who's the CEO and co-founder of a company called Nutrition for longevity.

It's a company that is dedicated to bring food, a farming in terms of ancient farming practices and food, nutritional science together for the consumer.

Nutrition for longevity has been working with organizations and doctors all across the nation to help provide food. As medicine to the public. Jennifer is also the CEO and founder of the Greater Greens, which is, a farm that's focused on reviving ancient natural and sustainable farming techniques to allow farmers to thrive and bring these innovation into, into, farming practices that are scalable and financially sustainable for these farmers.

So better food, better farmers, better health outcomes as well.

Soil, Microbiome, and Plant Health

Now, Jennifer's history comes from the corporate world, where she was the head of supply chain at a major pharmaceutical institution previously and has a lot of experience, engineering things that work in terms of supply chain and operations.

And so why is this important? This is important because, our nation's food supply is changing very rapidly. And it's not necessarily that the supply is going down, but the quality of the foods are actually going down.

There's a huge implication in brain health. So, so happy to introduce Jennifer to the farm. Thank you so much for coming on. I appreciate you coming. Thank you for having me.

You know, the the biggest thing about brain health is that, you know, I tell everybody that whatever goes into your body has an immediate and lasting effect, right?

But an apple doesn't mean that is the same. Apple doesn't come from the same tree, doesn't grow in the same soils. And so what is it about the way that farming practice taxes are in the United States right now?

And how does that relate to health and nutrition and the microbiome? So for me, I like to, really the similarities between a plant and how a plant thrives and how a human thrives.

And I like to take it back to the concept of the hollow biome. Right. And a lot of people are like, what's the whole biome? And you may have covered it already, but the whole biome is the entire organism that we are as humans.

You know, 22,000 genes are human genes, 3.3 million are gut microbiome genes. So what's interesting is about 99% of what makes up who we are, is the human side of it.

And the rest is this microbiota and plants are very similar. So if you look at how a plant grows and its immune system and what makes it a really healthy plant for the US to consume, it also has its hollow biome.

And for the plant, it's the rhizosphere microbiome is very similar to the gut microbiome. And it really regulates it's it's it's neural network. Is there.

Just like when you say the the gut the gut microbiome is our second brain. It's similar for a plant. So it's how it communicates. It's how it absorbs nutrients.

It's how it survives, stressors that happen. It's in its environment and it draws from that. So similar to a human, 99% of a plant's hollow biomes also non plant.

It's it's it's microbiota and it is what it draws. It's again stress coping mechanisms from. And so when we look at our farming practices is they have a dramatic impact on the biodiversity of the soil microbiome, what the plant draws from to cope with stress.

And so if it's depleted of diversity, just like the gut microbiome, it has less to draw from to cope with stress. And it has less nutrient absorption from the soil.

You know, we throw lots of chemicals with modern day farming on the soil because it's depleted. And that's how the plants can continue to grow. But the difference of a plant just growing, and the difference of a plant thriving, just like a human is very different.

Right? Right. And so they've shown that, soil that's very rich in microbiome diversity actually can have 200% more nutrients in it. So there's the nutrient absorption piece. Yeah.

And then there's the stress coping mechanism piece of it. And if you look at how plants cope with stress they create phytonutrients which is what we then consume usually as a superfood.

But those are actually chemicals for a plant to defend themselves against drought, insects and pests and all the different, potential stressors that they're dealing with.

And then we look, what's fascinating is those stress coping mechanisms for a plant. Then we consume as part of nutrients, and they feed our gut microbiome.

So we rarely ever are connecting those two hollow biomes and the importance of how they all fit together. And so when we consume plants, we're going to be thinking all the way back to how is it grown, what plants are we eating?

And are we actually feeding our gut microbiome the right things that are grown in the right way? But, what what's really interesting about this, all of this is that it's sort of a beautiful concept, right?

Is that the bacteria that's in our guts, related bacteria that's in the dirt in the Earth, that's around us. And it really makes us ground, ground us in a very special way.

So if I'm understanding this correctly, the whole biome, right, basically is the entirety of the plant, the soil, the roots, the nutrients and all that stuff like that, right?

That make up the plant to create resilience. And then when we consume that plant, we can create resilience and diversity within our own gut, which affects our brain.

Is that correct? Yeah. And that's I think that shocks a lot of people that that it's that interconnected. But it absolutely is. If you understand the soil microbiome, if you understand a plant's own biome, it's absolutely nature's.

Code. And. So many people are really shocked when they, start understanding the connection between the plant hollow biome, the human hollow biome that the plant stress coping mechanisms are actually creating the phytonutrients that then feed our gut microbiome.

Pesticides, Farming Practices, and Soil Depletion

So it's so incredibly interconnected. And we have to go all the way back to understand how the food is grown and then eating the right combinations of foods.

And I, I even think of how we feed our bodies as we're the super, we're this super organism, and we need to be feeding and focusing more, even on our gut microbiome, than our own primitive brain, which sometimes works against us and really be focusing on that prebiotic fiber, the probiotics, through fermented foods, all the things that are really helping our gut microbiome thrive.

And again, those plants coming in, how they're grown toxin free, also, less chemicals are all helping create a stronger gut microbiome, which is where a lot of our immune system is very similar to the plants.

So it's not just about what you eat, it's about where it's grown, what environment it's been in. Right. So where did this discussion of like pesticides versus no pesticides organic versus non organic.

Where does that come in. Well for me the number one thing is only 1 in 10 Americans are getting enough fruits and vegetables. So like first thing is get those up to a higher amount.

You know you should be eating 6 to 8 servings. Most people are maybe getting one. So like for me that's number one. Priority is feed that gut microbiome the fiber that it needs to thrive and the phytonutrients.

And and the best source of those is natural plant based sources. So then number two is make sure that it's coming from a good source. And a lot of people it has oh, it's so expensive to eat organically and eat healthy.

And there's ways to not have it be such a high cost. Like for me, when I purchase produce, I like to know where it's from. I try to buy local wherever possible.

I try to buy fresh, or immediately frozen. So I'm not against frozen. If it's if it's snap frozen immediately when it's harvested, that can actually preserve the nutrients.

So I look for those things. And then for me, kind of a rule of thumb, if I'm on a tight budget is I there's you've probably heard of the Dirty Dozen and the clean 15.

Yeah. There's surprisingly really it's a really good way to purchase your, your produce and really focus on those ones that have naturally low pesticide residue and then the ones that have very high pesticide residue.

I only buy those organic because I know and being in the farming space, people would be shocked if they knew how much chemicals were sprayed on a lot of these plants.

And being an organic farmer, I know why, because they're very pet. Some crops are very pest prone, so it's very tempting when you have a pest attacking a plant and it's not thriving yet.

You know, organic farming takes like 3 to 5 years to transition a farm because your soil is the immune system of all your plants, and you have to rebuild it. And so it takes time.

So those first few years, it's like really frustrating because you lose crops. So I know those crops and how much is typically sprayed on them because the first few years, those crops are brutal to an organic farmer, and you just have to suck it up and then get it to a point where the plants can kind of, for the most part, fend for themselves.

So those clean 15 are really important, those dirty, the kind of dirty dozen. It's really important that you try to find those with low, pesticide residue, because those pesticides are designed to kill organisms, microorganisms, and a lot of the same metabolic pathways that they block, or they damage in the pests that they're attacking on.

The plants are also in your gut, your gut microbiome, on the plants hollow biome, the soil microbiome. So it has a cascading effect. And it impacts two things.

Not only is it introducing chemicals into your body, but it's introducing chemicals into the soil. A lot of them are also bio cumulative, both in your body and in the soil.

So they're continuing to deplete the soil and everything. For me that I focus on with both the human gut microbiome health plant, soil microbiome is about biodiversity.

You know, it's bacteria have been on this planet for 3.5 billion years. Humans for maximum of 300,000. Right. If we look at 99% of our genes are coming mainly from bacteria, and you look at it as genes, as ancestral knowledge, we have a lot of knowledge to to pull from.

But if we damage that biodiversity, we're really limiting the stress coping mechanism in our bodies and in for a plant in the soil. So I'm always looking for how can we, really minimize that chemical use.

So as a consumer, you're also helping the future of our planet and the future of our soil microbiome when you buy low residue, produce. So that's kind of how I like to look at it and how we source our ingredients for, our meal kits and how I even personally shop, or grow my food.

So, so has farming practices in the United States really changed over the last few years or decades where they're just consistently more pesticides in the soil, in the in the nutrient, in the in the microbiome.

Density is in biodiversity is less in the soil like overall. Yeah, absolutely. And so you got to kind of look at our food chain and how it's been modified over time.

So if you look before the 30s, you know, if you look at the the time of the Great Depression, there was a lot of small farming. Not a lot of chemical use, not a lot of tillage.

Those are the two biggest damaging things to the soil is tillage and chemical use. And then after the Great Depression, we had a lot of issues with food security in the US.

So if you look at the New Deal and all of the programs around basically avoiding famine, it was about getting a really cheap fast food industry. So it was produce as much as you can, as cheap as you can.

And that was the call to action. But it was meant to be a Band-Aid. The problem is, we never went back and fixed the problems, which was already in the 30s.

We were starting to deplete our our soil. And instead of fixing that, that's actually part of what created the Dust Bowl. I'll be honest, as a farmer and an environmentalist, I think we're heading right back into that kind of a situation with our own soil today.

Because if you if you mix, lack of diversity in your soil, lack of a good, healthy soil microbiome with climate change and, more decertification, you're you're heading right back in that path.

But anyway, we never went back and fixed it, and all we did is just exacerbated it. So we now have more and more and more and more chemical use, because when you have a weak plant, it essentially needs help to be able to grow, even to just grow.

So now we're spraying more and more chemical fertilizers. Now we're spraying more and more pesticides. You know, in new Jersey, where our farm is, there's a lot of areas in new Jersey which used to be incredibly fertile land.

New Jersey used to be a lot of, glaciers. So we have incredible soil potential, but some farms can't even grow. So, soybeans, which are like the lowest input crop on the planet, you can almost grow soybeans, like in, in dirt.

And they can grow soybeans. So that tells you how much we're depleting our soil. And that nutrient exchange can happen. And the plants essentially have no immune system, so they can't defend themselves to pests, to drought, to different things because they they don't have those signals to adjust.

How they're manifesting their DNA. And so we worry so much about like, human chronic disease. But it seems like the plants also has a chronic disease issue.

It absolutely gaps. Our plants are so, malnourished essentially, because if you even think about it with a lot of like cheap vitamins, like I'm not an anti vitamin person, but you have to get good quality ones because otherwise you absorb such a small amount.

And so even chemical fertilizers, the plants are only absorbing very small amounts because it's not it's not again the plant's natural way of nutrient exchange is through its microorganisms.

In its microbiota. So it's it's a really important concept. We have to change our farming practices. But again, they've gone in the wrong direction because of a true need at the time to address famine.

But we never went back and fixed it when we didn't have that issue. We have plenty of food in the US to feed every single person in a in a high nutrient way.

We're just spending 80% of our farmland to grow grain for meat and not a lot of vegetables. And then we're growing it in a way that's really not very sustainable.

So. Well, now, not only that, but, you know, there's there's a lot of issues with farmers in the US and mental health. Right. And there's a lot of burnout from from the farming industry, you know, pretty much maybe even more than the medical industry.

What percentage and what's going on there. Yeah. What is going on there and how you fix it. So honestly, of every profession in the US, I probably have the most empathy for farmers, maybe doctors and nurses.

I would put kind of in that same playing field, especially after Covid, but if we look at burnout, if you look at stress.

Farmer Stress, Debt, and the Need for Change

So farmers, a lot of people don't know this many years. It can shift many years. Farmers are the highest suicide rate profession in the US. And that shocks a lot of people.

They kind of think, oh, there you have such a relaxed life. They're just, you know, driving the tractor. How stressful could it be? But if you add on the tiny margins that farmers get in our food chain, they they get the lease right, they get a tiny little sliver.

Most farmers, the average farmer in the US is $2 million in debt. It's a really tough business to make money in. The US pays the least per capita of food of any country in the world, so we really undervalue good food.

That's another issue. The consumers pay the least like amount of money per per capita, like in food, a food of any country in the world that's in the US.

Yeah, yeah. And we spend the most on health care. So I think there's a direct correlation there. But again, that's for, food in general. But healthy food is obviously then coming at a premium.

And you look at the farmers and they're getting a tiny sliver, but they take the whole burden of the industry on their shoulders. So if you look, people say, well, why don't farmers just move organic?

Isn't it an obvious thing? And the thing is, farmers do know that there's value to it, but it's like I mentioned, it's hard to transition a farm over to organic because it takes multiple years of allowing crops to essentially strength.

You're basically having to build up like a human has to rebuild their gut microbiome. If it's damage, you have to do that with your soil, and it's painful and it's expensive.

And farmers are pretty risk adverse because when you're already in debt or you're at risk, you know, that's hard to do. And then on top of that, nobody can debate the impact of climate change right now.

And if you look at the areas that are getting hit pretty hard with flooding, also drought, it's impacting our farmers in a really dramatic way. And again, another topic, another day to talk about the sustainability impact on farming, but it's just continues to increase the stress in the situation.

So farmers are already super stressed out. A lot of them can't even afford to eat healthy food. They're they're eating some of the cheapest food out there.

And they're kind of stuck where it's really hard to change their ways. It's I never blame farmers for our food system and the use of chemicals and everything, because they're a little bit of a a victim of the entire, situation that we're in.

Is there is there a solution or proposed solution? There is. I mean, there's several things that can be done. If if the average American. Eat. Again, 80% of our farmland is used to grow essentially beef.

And there's a lot of benefits to that. So we could start even as consumers shift in the supply chain to vegetable production, which is actually very low.

Very few farms actually grow vegetables. I think supporting your local farmers is huge and really starting to demand changes. And, and I think just really understanding where your food's coming from and supporting those, those local farms, it can absolutely be fixed.

We know. And what's amazing is we've known even before the 30s, if you look, before we headed into the dustbowl, there were parts of the USDA that already were writing extensive reports to rebuild the soil microbiome.

And what's amazing is they knew back then that it was important. But even out of the Human Genome Project, it's branched into all of these different, essentially hollow biome projects.

And there's one focusing on soil. And they've estimated that we know about one times ten to the -20 eighth power about our soil microbiome. So essentially zero you if you just like slightly round that out, we know almost nothing about the super powerful, microbiota that's been around for 3.5 billion years.

So we don't know a lot about it. We know we're damaging it. We know the practices that can rebuild it. So low tillage farming, low use of chemicals, organic farming is is one of many practices that can do that.

It's just it has some of the strictest standards. And those are really to reduce the, the chemical residue in the soil and on the plants for somebody to consume.

But it's hard. Like I said, consumers have to be part of the solution as well. It can't just be, you know, farmers have to change. Some exciting things are coming in that direction, though.

There's some new policy coming out that came out of the white House conference on nutrition and, hunger. And one of those things is actually changing the farm bill to truly fund more organic farmers to transition and more regenerative farming practices and sustainable farming practices.

So it's coming, but it's slow. And I think we as consumers have to start to push that a little bit harder. Absolutely. Well, let's get into brain health and just medical in general for for a little bit.

So we know, for example, that in patients with Alzheimer's disease and even Parkinson's dementia, we know that a lot of the pesticides that are in the soils end up in the body, organs, brain.

We can see it in patients, urine, urine specimens. They've done postmortem studies were actually looked at in people's brain, are able to find all sorts of stuff in their back to viruses that are pathogenic, as well as other

chemical organophosphates, etc., etc..

And so obviously there's there's a link between the quality of food and brain health. And perhaps we're seeing a lot of the deterioration of brain health.

And, and maybe part of the issue is, is the food, food supply and the quality of the food supply. And so, you know, and, you know, I had a chance to visit you a few years ago in your new Jersey farm and, learned a lot and literally touching the actual roots and experiencing that, the whole thing.

Brain Health and the Case for Better Food

Well, what is it different about, like, your farming practices that makes sure that the crops that grow are the highest in nutrition? Yeah. So there's, there's a few farming practices that we use that I think are really important.

So, we, we try to really protect the soils. So the soil is think about it as your skin and your soil microbiome, soils very similar. So you need to protect it from the sun.

You need to protect it from wind damage. So, you know, we think the soil is just indestructible, but it's this living thing that we need to protect. So if you look at what Mother Nature does, like in a lot of people hate this because they have their perfect garden and they and they want their flower bed and they want it free of weeds.

Right? But nature will cover the ground unless it's decertified. They'll cover the ground as fast as possible. And that's really a natural mechanism to protect the soil.

So in farming, a lot of times we tell and we completely disrupt the soil and then we leave it exposed. And that's really not good for the soil. So one of the practices we use is trying to keep the ground covered as much as possible.

We also try to do no till wherever possible. So usually when you first start regenerating a farm you have to do some tillage to get it kind of reset. But we try to cut beds, we do raised bed farming, we try to cut beds and then never really disrupt them.

And that's really important because just like your gut microbiome where you have all this lining and you build up all these colonies of bacteria that are communicating and really creating part of that super organism, the soil microbiomes, very similar.

So you have I don't know if you remember when you were on the farm, I was showing you some nitrogen fixing plants. And in the roots you can see these little nodes in the bacteria.

All hyper cluster around those for good nutrient exchange and essentially communication. And when you till you're completely disrupting that and and you're disrupting the fungal so, so in the soil fungi is also a really important part of it.

It's part of that neural network that connects plants. And, and literally it's so strong that a plant can communicate with another plant like several feet away from it.

If it's getting impacted by pests, if it's being impacted by drought before the other plant. And so it's it's even a full network with other plants that are communicating.

It's just absolutely incredible. But when we tell and when we don't cover the soil, it's getting damaged. And then the other is we don't use herbicides, synthetic pesticides.

When we do use a if we do spray, we rarely do. But if we do spray, it's usually with a fight. Another phytonutrient. So we're using plant chemicals to combat the pests, that certain plants generate, like, neem oil and things like that.

And we use them in very small amounts and they're not bio accumulative, which is really important because a lot of synthetic chemicals like DDT, which we, we said as a country for years, that it was safe, you know, and we could spray it, you know, there's pictures of beaches where they're just spring and there's kids everywhere and still 98% of our population has, at least metabolized or full DDT in their system.

So we don't know, in 20, 30 years what we're going to be finding in our system that's still residue from what we're spraying in our on our crops today.

So we really try to do minimal, no synthetic use of chemicals and very minimal even, whenever possible. And then we also have a lot of diversity of the plants we put in the ground.

So in the US to do that, mass production as cheap as possible, we have a lot of monocultures. Well, plants similar to humans. You inherit some of your microbiota.

This, this other 99% of who we are, we inherit some of that. But we also acquire it over time. And and we can acquire certain ones based on the different stressors we're going through.

And plants need to do that as well. But if they always have mono crops, you're not getting that diversity in the soil because you're not giving different scenarios and different plants the opportunity to thrive and create that diversity.

So we do multiple different crops. Mono cropping is, not good. And then there's connection with insects and the soil. They're all part of the system. And we've lost 90% of our insect biomass over the last 30 years.

That's catastrophic if you understand pollinators and how that works.

Insurance-Covered Food as Medicine

So we're also building up a lot of perennials which have permanent root bases in the soil, and they also create pollinator habitats. So we're just really looking at building back up that ecosystem so the soil microbiome can really thrive.

I have some older insects. We're talking about birds, all sorts of different species that's really involved in the in the food supply. And I find it so interesting that the way that, you treat plants is the way that we really should be treating humans in the fact that, you know, to treat the plants, you're actually giving vital nutrients, the, natural floral nutrients to allow the plants own immune system to be improved.

And that's what, you know, what we're supposed to do in humans. We're supposed to eat good food to allow our own immune system to be to be improved. And, and, you know, this is, this is so similar to, I think, this concept of brain health.

And, you know, when, whenever someone has brain health issues, whether it's mental health or, or physical brain health, such as, you know, Parkinson's, Alzheimer's, etc., etc., multiple sclerosis, the way that we approach it's very similar is that we need to get the brain the things that it actually needs because of the brain's own immune system, that neural network, which is very recently discovered.

We didn't know the brain actually had his own immune system until very, very recently, just the last few decades. That neural network is supported, by this, this concept of, of a whole of biome as, as you say, and that really makes me think twice about, like, the food that we put on the table right.

Do you think it's, there's, there's going to be a time where, we as a nation, like, start using, like, food as medicine that's covered by insurance and stuff like that.

And what is that going to happen? So it is happening now? No, I mean, I think there's a lot of things working in this direction. And I think the human, the, the Human Genome Project really opened a lot of eyes to the field of epigenetics.

You know, we're not predestined and just stuck with the DNA we have as far as how we we manifest that are we try to describe that. And so we know now that we can it's like a rubber band, right?

We can flex it and we can do different things. And I think then nutrition started heavily getting linked to that with then researching the gut microbiome.

And I think there's plenty of research. I mean, the research can't be debated, that nutrition can have a dramatic impact on that. And so what's been exciting is there is a recognition of that, and there's a lot of a really strong scientific body showing that, and insurance companies are really starting to focus on that.

And even at the end of 2019, the Chronic Ill Act passed. And what's really incredible about that policy is it covered, medical nutrition therapy and medically tailored meals, as a covered benefit for people with chronic illness.

So 36 different chronic illnesses and, people's insurance companies will cover them getting fully prepared meals that are focused on those indications and helping be a complementary service, a part of their treatment regimen.

And a lot of people don't know, this is probably one of the most hidden benefits that's out there is wait a minute. I can have medically tailored meals fully covered by my insurance company and even a lot of commercial plans, even if you're not, really far along with a chronic illness or you're not a medicaid Medicare patient.

Those are the best covered plans. Or the Medicaid and the Medicare Advantage plans almost cover it 100%, and then commercial plans usually cover a portion of it.

And that's even on preventive services. So our company, works with most of the largest insurance providers in the country. And, we get we directly, work with those providers and we provide these meals to their clients or their beneficiaries.

So, the exciting thing is it's already there and there's way more funding coming in this space. So the white House conference that just happened a few weeks ago, they released $600 billion to go in this direction of food as medicine, on top of what's already on top of what's already there.

And so step one has already happened. I'm really excited. Obviously, I moved into this space and we're gaining a lot of traction and moved into this space for that reason, because I spent 20 plus years on the pharma side of things, and I wanted to do more with food as medicine and really have that complementary service and have it taken seriously.

So step one has happened. Now, insurance companies the government are covering food is medicine to help with treatment of chronic illness. They know it's valid.

They know it's important 36 different indications. Step two, which we're still working on is the prevention piece of it. Because obviously it's best if we just never get into that, disease state, that imbalance of this whole biome where we need to work symbiotically with all these, different organisms.

So that's what's really key is that we start shifting that model more towards prevention. And the exciting thing is that's coming to. So a lot of our plans are already starting to cover medical nutrition therapy, and even at least a portion of the meals for people with pre-diabetes, people predisposition to obesity, things like that.

So the needle is really starting to shift. We do a lot of work also with food insecure areas because food insecurity, eating that they have directly linked to all ten of the most costly, preventable diseases is food insecurity.

Even socioeconomic status is not linked to all ten, but food insecurity is, so we absolutely know that access to healthy food is key to health. And, so that's starting to shift.

So I think the exciting thing is we've already made it there with supportive treatment. And then we're moving to prevention. So we're getting there as a country.

And and the focus is really shifting heavily. That's awesome. And so I mean this is this is very new and fascinating. Doctors don't know about this, right now either, but I think that's that's going to change.

But let's talk about, your company, nutrition for longevity. So, what is the company? And, what do you do? Yeah. Yes. So we do, prepared meals that are tailored to.

I mean, we have just prepared meals for the average person that's healthy and wants to stay healthy. So the foundation of our meal kits is the longevity diet.

So that was if people don't know that was written by a doctor, Valter Longo. And it's not like this diet that you just do as a crash course. It's really just a way of eating.

So it's more of a lifestyle and what he did is he spent 30 years researching the longevity regions of the world. So the places where people live the longest, healthiest lives almost void of chronic illness, you know, into their hundreds.

And what was amazing is when he researched that, he found that even though they eat different foods, their macronutrient profiles are almost identical and they're mainly a plant for diet.

So there's a little bit of fish and meat consumed. It's very small. And you know, we here in the US like this carb craziness. Carbs are bad, carbs are bad.

But that's not what we see with people that live really long, healthy lives. And it's mainly because they're eating that high fiber, high fat, a nutrient rich diet.

And then the things that are very rich in fat, salt, animal based proteins, that's more of a delicacy for them. They're really it's it's like flipped from the typical us when I just try to give it to people short and sweet, I'm like, just flip the concept of going to a restaurant in the US and you get this huge slab of meat as your entree, and then a little side of vegetables, it should be flipped.

And we have to start thinking of that in a different way. Like 75% should be beautiful vegetables, a little bit of fruit, nuts, healthy grains, things like that, and then that tiny portion of animal based protein.

Nutrition for Longevity and Tailored Meals

So that's a big thing that is the foundation of someone that just wants to potentially live longer and not just live longer, but that healthy part of their life, extending it, their health span.

And that's really critical. And in the recent study, the meta study that Doctor Longo just published actually shows if you start that at age 20, you can actually increase your health spend by almost 14 years.

And if you even start at age 60, it's eight years. And that's not like I think people think it's like a few months, right? Like, let me just live my life, eat whatever I want.

And I don't think they realize how incredible that is until they're already in a disease state. And then they're like, how do I get back? How do I get my health back?

So that's what is our baseline. It's just healthy longevity diet. But then what we do is take it to the next level. With the 36 medical indications, as we tailor those macros to what is specifically needed for that disease.

Because what a renal patient needs is very different than somebody with type two diabetes or cancer and even cancer. We're working with the Mayo Clinic.

We're doing some research this next year, even cancer in chemo versus survivor ship is very different. And and if we've learned anything in this space, it's that there is not a one size fits all.

Tailored nutrition is really important because the different indication and even the different person's health state at the time are the underweight or the overweight really matters.

And so that's what we do, is we tailor to that person's needs, and really try to provide nutrition that is, is meeting the needs that their of their body at that point in time in their life.

So that's in general what we do. And then on the medically tailored side, we work with insurance companies to cover that benefit for the patients that need it the most.

And like I said, a lot of plans cover it, 100% on a certain amount of meals per week. And then some plans, like commercial plans, will cover a portion of it, but then it makes it less than buying groceries.

So that's all done for you. And then we do prescription produce boxes as well. That'll give you all the recipes and all of the fresh produce, farm fresh produce, to make it yourself.

And so we do we call those are transitionary services. So people can if they're not disabled, they can then continue and sustain that over long periods of time.

But the fact that I'm a doctor, I can actually prescribe food, you know, being delivered and it being available. Right. Really takes away the uncertainty, for me.

So that's that's really amazing. And I think it will I think really over the next ten years, the concept of prescribing food is going to be very commonplace within the US medical system.

And I'm really looking forward to that, because right now, you know, for example, in most brain and neurological disorders, you know, there's there's medicines that may or may not prolong life.

There's medicines that, you know, may or may not, may or may not delay the onset of worsening memory loss. Right. So there's a lot of uncertainty there.

We know from, from the pharmaceutical industry is just not going to get there. But we know that when lifestyle habits change, when the quality of foods change, there's a significant improvement, you know, over time, and that's that.

The more those studies are coming out as well. And so that's really exciting to see. Now, if someone wanted to know if their own like medical plan as it covered these foods, like how is there is there a website or is there somewhere that they can find out.

Yeah. So we have a website. Our general just helping longevity meals is nutrition for longevity.com. Our medic we tailored side. So somebody that wants to identify if they're covered is in federal health.com.

And that has information about what meals we cover. And that allows numbers that you can call and have us check your, insurance. And if they cover it and if they don't cover it, we have certain programs that can help people afford those meals.

Right. So it's the, letter N number for L and then health.com, right? Yes, yes. Yeah. What? I mean, this is amazing. This is the most exciting news I've ever heard.

In my career as a physician, the ability to prescribe through the ability for people to eat, I mean, that's, that's that's just, changing generations of health, not just in one patient's.

Right, but multiple generations down. And that's. Yeah. And we absolutely see that. So we've done some studies and, we weren't intentionally tracking it.

We were tracking other data. So we see incredible blood sugar control with our meals. So we have really good

cardiometabolic meals for, people coping with prediabetes or type two diabetes.

And, we get a 97% time and range balance, which is incredible. It's the average person with, dealing with that disease is around 70%. So huge, huge balance of blood sugar.

And again, that's a lot of the fiber you're feeding your gut microbiome, what it needs. You're starting to reverse the insulin resistance in the body.

Starting to find that symbiosis that balance. So just incredible opportunity there. But what we heard from a lot of, people in the study is that they were starting to cook this way at home on the days they weren't eating our meals and their kids, their children, a lot of them were pre-diabetic and overweight, and their children started losing weight and moving into a non pre-diabetic state.

And they were blown away because like a mother, you're always stressed or father, you're always stressing about what your children eat. I'm always making sure my kids are eating the vegetables and getting as much in front of them as possible.

But when you start seeing the transformation that generational because it is a very generational thing, you start shifting it. Yeah, for many, many generations to come.

And that's, that's when I think it's going to really become the preventative solution. It needs to be. Well, that's, that's it's absolutely amazing when and I assume we're like these foods for nutrition, for longevity.

They are coming from your farm. Correct? Yeah. So we we don't just source from our farm. We, we try to source as much as possible from our farm, but we also work with other farms that use similar practices.

So we're trying to really bring, that clean nutrition as much as possible to life. We also don't use all the synthetic additives, fillers, preservatives when we make the food.

So it's very simple, minimally processed, whole food plant based. We do offer fish and chicken but or poultry. But in in really controlled amounts. You know, we control salt, fat and sugar like a controlled substance because it really needs to be for an optimal, diet for the average person.

And, and again, we tweak the macros depending on, the different indications. That's great. And my last question for you, and this is actually coming from my eight year old daughter, we go to a farmer's market every weekend.

We try to find a new one. There's there's a lot around Houston, which is nice. And she asks, like, how what do we ask the farmers, about their farm and their farming practices to ensure that we're getting, like, the best type of produce in those farmers markets?

Yeah. I mean, I think the first step is to talk to your farmers. They're so passionate about what they do. And I think you can ask them, what do you do to protect your soil?

It's probably one of the most basic questions to ask. And if they don't really have an answer for that, they're probably not focusing on it. So if they talk about how they care for their soil and what kind of inputs, you can ask them what kind of inputs do you use?

And you'll really quickly know if they're using natural inputs or chemical based inputs. So for example, we use lots of organic compost on our farm. So even when we chop up our vegetables and there's like carrot tops and things like that, if, I mean, we have some interesting things to do, like we have a carrot top, pesto and different things, but if we don't use it, it goes right back to the farm and we compost it.

And, and then also we have some goats on the farm rescue goats and we use some of that manure, in the compost because, because animal based manure, there is a good, symbiotic relationship of home to animals, you know, naturally, that we did have a lot of herd animals in the US, and they actually punch the soil and they're,

they're ruminant animals can actually regenerate the microbiome really fast.

So we'll use those inputs from ruminant animals. And then just organic matter like nature. I always kind of cringe but laugh in new Jersey, that one of the richest, resources everyone throws away.

So leaf litter, everyone wants this beautiful, perfect lawn. And so, they'll rake up the leaves and throw them away. So we get the city and different, landscapers will bring leaves, and we'll add those to our compost, and it just creates this incredible rich compost.

So those are different things that we do to increase the soil organic matter, which is essentially the structure of soil. And the average farm, in the US, I think is about 1.5%.

It should be like nine. And it's like a big sponge. So it sequesters carbon. It holds in water. From a sustainability standpoint, they say farming is the lowest cost, fastest way we can reverse climate change.

And it's that organic matter that can really make that exchange. So if you start talking to them and there's no discussion of natural inputs, ways that they're increasing the biodiversity, they're probably not.

How to Evaluate Farmers Markets and Support Local Farms

And I'm not saying you shouldn't still buy from a local farmer. It's still probably better than, you know, buying a huge chain tomato that, was probably picked 6 to 8 weeks ago and then gassed on location because that's how most tomatoes are, are, produced in the US.

Once you understand farming, you really it's very enlightening, how a lot of vegetables are grown and they're picked green so they can stay firm and be transported across the country or even from another country and then gassed on location.

Then buying from a local farmer that's still an advantage is probably farther along in its life cycle, maybe even ripened on the vine. But on top of that, then if you can take it the next step and get more natural.

And I don't only buy, it's important to talk to the farmers because a lot of small farmers are not certifier certified organic. It is a really complex process to go through.

It's very paper intensive. So most farmers I know that are smallholder farmers are not certified efficient. Okay. It's hard. There's for them to get certified.

It's a it's a huge, process to overcome. So small farmers rarely have or equipped with the resources to do that. So but you can already ask them what they're doing.

And most farmers are going to be really honest with you, if they're doing it or not. So it's not just the organic, it's actually are they using natural practices because a lot of them will say, I use natural practices and they'll they're doing all the same stuff.

They just can't afford or they don't have the paperwork. And it's a lot of paperwork. Organic certification is usually mid to larger sites farms because it's very bureaucratic, you know, process and it's it's needed.

It makes sure that there's that compliance. But it's hard for a small farmer because they're already working in spring and summer, probably close to, you know, 14 to 20 hour days.

It's very labor intensive, very backbreaking work. That's why I love farmers and have a huge empathy and passion for them. But you can ask those questions and just get to know them a little bit more and, and even sometimes asking those questions might get them thinking about, you know, will they have a market if I do move organic, will these will these folks buy my produce from me things?

And, you know, this, this entire talk about brain health really turned into a very holistic view of the all the organisms that's surrounding us, the Earth, even the insects and the birds and the population there.

And so the, the, the very holistic concept, you know, behind, the food sources and in the environment is far more than, than I think any of us could really imagine not being from like that world.

Right. I think that we really have to take a lesson from you and talk to the farmers, and I'll tell you, just personal experience. You know, there's, there's nothing like eating produce, like from a farmer and knowing, like, who grew it because the intention behind eating it, the actual taste is different, not necessarily just because of the produce itself, but is the fact that, like, we know where it came from.

We know like, who put love? You know, into this, right. And that's really, made like my family closer around the kitchen table, because we knew who it came from.

And that's why, you know, visiting, these, farm stalls and, these markets are so addictive for us as, just as a culture now, it's sort of our. We can think that that we do.

I always get super excited when a new farmer comes on. It's like, hey, I haven't seen you around in a while or haven't seen one at all. Are you new here?

And it creates this, awesome dynamic around the dinner table that I think we all need to change, because I think the culture of the US is turning more center on iPads rather than the kitchen table.

You need to kind of bring that back. Yeah. And so that's that's amazing. And if we look at the chronic disease population right now in the six and ten people in the US right now are suffering with two or more chronic illnesses, which is unfathomable.

And during the pandemic. All right. Over 300,000 health care professionals left the health care profession, internal medicine, which is one of the two primary care designations.

That's that's that's over 13,000 people left. Internal medicine designation, which is that's my designations. Internal medicine, family practice, 10,000 people left.

And if you look at the highest rates of doctors quitting in the US right now, I think Hawaii is like number one right now and that Hawaii is just in trouble because they're so isolated and followed by a lot of, different areas in the South and the northeast.

So the supply of doctors are actually diminishing. The there's no new physician training programs in the nation right now. And so we really have to utilize, food as medicine and take that and take food into our own accord.

And the effect is generational change. I think that's the really, that's the only way is is going to happen. Yeah. But I want to thank you so much for coming on.

It's been a fabulous discussion. I hope people learn something from this. And I hope people will learn to be watching this. And this is planned to go to a farmers market this weekend and start having those conversations.

I promise you won't, you won't regret it. So once again, website is nutrition for longevity. Is it the number four? Is that for you? So there's a little bit.

So if you want to just go on and purchase just for your health span, it's nutrition info or longevity.com. So it's spelled out if you're looking at the medically tailored meals it's N number for L health.com.

So hopefully you can share that in a link. But we're we're really excited to be helping people and, and definitely support your local farmers because also farmers are getting out of the business so fast.

The next generation of farmers aren't doing what their parents did. So it's similar to the medical field. It's very much a crisis. So definitely take care of your farmers.

Get to know them. It's such an important part of our overall health. And it really is important that even where the food is grown is, taken care of. So I appreciate you having me on and that you're taking care of your farmers locally. Because it's really important.

So what you're saying is, if farmers and doctors partnered together, there's no need for either to leave the fields that. Correct? Absolutely. I even say I change the pH to an F of farm a C.

Yeah. And absolutely, it's absolutely critical. And, and some doctors should even become farmers. You know, I always say everyone should also grow at least a little bit of their own food because you'll waste less food.

You appreciate it. And there's even studies showing that the ingestion. I'm not recommended that everyone eat dirt, but or soil. But even there's studies starting to link even direct benefits of some of the soil microbiome directly ingested into our system.

So get your hands a little dirty, grow at least a tomato or something. Have your kids do it. They're much more inclined to eat vegetables if they grow them, because it's a fun process.

So just get involved in how the food's grown and how you consume the food. And and I guarantee you it will start to change your life. Awesome. I can certainly hear the passion in your voice and the look on your face, so I appreciate that.

Well, thank you for being on. Appreciate you have it on. Appreciate it. Thank you.