## Guest Introduction and Background

Welcome back to the conversation. My next guest is Melanie Murphy Richter, MS, RDN. And that's already and she holds a master's in nutrition Healthspan and longevity from the Longevity Institute in the Institute at USC.

She is Elle Nutrition director of communications and medical science educator, and was named the Academy of Nutrition and Dietetics 2023 Young Dietitian of the year.

Melanie also teaches nutrition physiology at UC Irvine and runs a holistic ritual. Her holistic nutrition practice, where she blends science and integrative healing with a focus on gut health and longevity.

Melanie, welcome. Thank you for having me. It's great to be here. You are busy. I am busy. You got a lot going on. Yeah, I sure do. I'm curious how you what was your focus like?

How did you end up in this sort of longevity sciences gut health? What? What really drew you there either in your educational or your personal practice?

That's a great question. So, my first career was actually in health care PR, so I am a full career change, in my late 20s, early 30s. And part of that, to answer your question, was because I was suffering from my own, gut issues.

I had, pretty severe IBS, IBD for a full decade. In my, my, the entirety of my 20s was kind of defined by my IBS, IBD, and I remember when I was kind of nearing the end of my PR work, I remember I was like, I this is just not making me happy.

I'm clear, my body is upset. It's clearly acting out, what can I do? What how can I change careers to be something more in alignment? And I remember coming. I've always loved nutrition.

I've always loved the impact of food on the body of. I've. I've been. I'm the type of person that Googles and researches what the mechanism of action for blueberries is on my specific body.

That's. I've loved geeking out to that stuff. So I ended up deciding to go back to school to get my master's in nutrition. So the gut health piece was always kind of part of my personal story.

But when I went, when I decided to go to the, Longevity Institute at USC, which is where, Doctor Valter Longo, one of the leading scientists in longevity nutrition, he founded that institute.

I had no idea at all the impact that that school and also the learnings would, would bring to me. I always knew preventive health and longevity. Feeling good in your body with these were words that were kind of ruminating my brain all the time.

## Personal Gut Health Journey

I had no idea what that meant, actually, and how to how to, pursue that until being in that program and actually taking Doctor Walter's course, my, my second year and we actually went to Italy and it was just this mind opening experience of, of all of the ways that nutrition and fasting and, gut health, it was kind of a cacophony of this myriad of things that I had learned coming together in a in a really beautiful way.

So, yeah. And, and it when it comes to, when it comes to gut health, it is the centerpiece of longevity in so many ways, because we are what we digest, right?

If you can't digest the incredible food that you're eating, it's like you're not eating it at all. So we have to if we are

made up of minerals and vitamins and nutrients, we can only be as good as our gut is.

So that's a that's part of why I focus on it so, so much in here in the Western world, so many of us have inflamed guts and we're struggling. So it's it's been a real pleasure and a joy to work with, patients in this way and to be at al-Nusra in this capacity to.

Well, we share a very similar path, actually, I came from engineering and, ended up in sort of the functional medicine, longevity space. So, I kind of landed in a lot of the same areas.

It sounds like I included doctor, Doctor Longo and visiting, all the blue zones and seeing firsthand what what that life looks like. So, but but I want to get into the sort of clinical stuff that you've, that you're that you're such an expert in.

But but first I want to touch on, like, the real experience for you. You know, that irritable bowel stuff that you had to deal with. What? Maybe just give me a little insight to what that's like, when you, when you're suffering from something like that in the traditional medical system doesn't really have any great solutions for you, right?

So you're finding your own path. What was the turning point for you? What were the things that you really, really landed into? Okay, now I have a grasp on this and I'm making progress towards resolution.

Oh my gosh, I, I remember sitting at probably my third or fourth gastro andrology appointment and I think it sounds fun. One of the doctors came came at me with, with just like, and this is if you have had any experience with IBS or IBD, it is not only physically awful, but it's it's for your self-esteem and just your ability to move about life, being social, fearing food, anything you eat is like going to cause a problem if you don't know what your issue is, it's it's a really it can be traumatic.

It's a traumatic experience. And I remember sitting after years of this and at my umpteenth appointment at a gastroenterology appointment, and he just he he looked at me, he was like, you have IBS.

This is just going to be your new normal. So like, you know, maybe, maybe try to avoid gluten and like, you know, it it was like this really deadpan experience of like, what do you mean?

This is my whole life. This cannot be. This cannot be real. So I ended up I ended up doing tons of research on different specialty labs that, so I ended up taking this as a it was a multi-year process.

Yeah, sure. But I ended up taking a specialty lab out of Italy, actually, to help me identify some of the main inflammatory food triggers that I was experiencing.

So the first stage of my process was me of like, removing a ton of inflammatory foods that my body now doesn't have a problem with, but at the time, they were super inflammatory to my body.

And then I found out incredible naturopathic doctor, in El Segundo who kind of changed my life. I mean, she it was it was the first time I had felt personally seen and and really, she took the labs at the specialty labs that I had had drawn.

And we did an elimination food auditioning protocol for more than a year to get really detailed into what foods were causing, what issues. And I became very body literate, which is something I teach in my practice, quite a bit.

I feel like a lot of us don't have that body literacy that we need to to be. Well, but yeah, it was a it was a very long road. But I would say that the, the biggest turning points for me was getting the right tests and the right practitioner that didn't dismiss my issues.

It really was coming along this journey with me. And and you don't underestimate the power of feeling seen. Even if even if you find a practitioner that doesn't really have all the answers right away for you.

If you find a practitioner that helps see you and can empower you and walk along this journey with you, it makes a huge difference. I think that goes to goes to save where it goes to show for most things.

But yeah, and ethical and I think with the, with the, you know, a lot of traditional medical models right. This resignation to like this is just what you got you do with.

Yeah. It's like I mean that's really disempowering. That's really sad. Especially if you're someone who which I think you are likes to find solutions, likes to move forward, likes to result like doesn't want to just sit back and accept this, this reality that you're suffering and you got to deal with it right in your young.

And it's like, I mean, that's what a what a really disempowering thing. Right? And of course, the bedside manner is not there. There's just a lot that that goes on with that.

Right? So you, you found somebody that helped you kind of navigate this and ultimately figured out the solutions for you. And then as part of that journey, or perhaps after that, you're now studying this stuff.

Yes. Lab from people who have, who've done deep research on this, I mean, doctor, doctor Longo, as part of his longevity research and the gut is very critical.

Right. And food. What what would be what became apparent to you as you got into this or the more the education side of things? What sort of the the new things that you were learning at that level that you didn't maybe understand as you were going through them?

What what were the big kind of ahas around, how the gut really functions and contributes to our well-being and ultimately longevity? I think, well, the first thing that comes to to my brain is that your gut can change.

And it can actually change pretty quickly. So there's, and there's stages of change too. I mean when I, what I was just recalling to you is this food elimination, food auditioning.

There was a, there was a need for my body to quell this mass inflammation that was in my body at the time. So that require me to remove a lot of things and to, you know, get back to the basics.

But then there's there's incrementally as you go along, you, you see your you need to include foods that help to restore that balance, to restore that the, the, junctures of your gut lining to help keep things firm and tight.

And then you have to work on bringing the right types of microbes into your gut to really support the diversity in the robust, aspect of your microbiome.

So there's a lot of different stages of it. So I would say the thing that in my own personal journey that was surprising to me was just how, how quickly, how quickly your gut can change and also how how that it's a process.

It's not just something I think at the time, especially as a young person, you know, and I was in fitness too at the time. Like, we have this, we get told that we should be able to see change fast.

Like, if you if you, you know, we're not really very good at sticking with things for the long run to really see it through to the end. And my gut, my gut healing journey was both quick.

And also it took me years to really now I now I can eat so many of those things that I couldn't eat before with no problem. And I'm and I don't have the same it my immune system.

I rarely get sick anymore. Like there's a there's a ton of really incredible things that have happened. And then, you know, of course there was the elements.

I think one of the biggest things from my program that I learned was the element of fasting and autophagy in this whole process, which I think, you know, I know we wanted to to touch on today.

But yeah, there's there's I don't know if any of that really resonated, but it's, it's both a quick and a journey. You have to stick with. But the power of it in the long run is, is profound, especially for, for longevity and healthy aging.

Yeah. I mean, what comes to mind as a practitioner myself and what I've seen and what I've incorporated in my own life is there's, you know, when you're in this place of dysfunction or disease, there's a therapeutic action oftentimes that is required.

Right? And this is more of the short term. This is what we got to do. This is the intervention part. Right. And then and that's sort of the quick you could say but but the long term is like how do I integrate a new normal.

Because whatever it was, the energy environment, the habits, the food choices, whatever it was that was contributing to the dysfunction or imbalance, that's got to change.

And that's more of a longer term process. Right? So it's like integrating a new normal that is not this crazy therapeutic.

## What Gut Healing Taught Her

I'm going to have to eat so specifically for the rest of my life. But that's more to the therapeutic side. Right? So, I totally, I mean, I really understand what you're saying there, and there's, there's sort of this fast acting thing and therapeutic approach, but we got to integrate new normals and that's that's oftentimes new ways of thinking, new habits, new understandings, and then integrating it into our reality.

Right. So that that can be a process. And oftentimes it's two steps forward, one step back, three steps forward, two steps back. Right. And it's it's a little bit frustrating.

Sometimes you can get frustrated yourself. It's a little bit yeah. It's not a straight line right. But but as we integrate that new normal, then it just becomes like I said, that's our baseline and it's easy and doesn't have to take so much work.

Right. So I think that's where the shift takes place. Is as we get through that. Now there's actually not a lot of work because this is just how how we are.

Right. Right. And and through that process, you start to as you start to clean up aspects of your physical health, all of the other elements that were contributing to your physical people don't give nearly enough credit to unhealthy relationships.

Stressful job. I mean, there's it doesn't come as a surprise at all that I started healing the second I left a job that was no longer serving me to right.

Like there's so many other things that come along with it, too. And it can add up to two steps forward or one step forward. Two steps back is kind of definitely hit the the perfect way to describe that that.

But you have to, you know, be open to seeing where that journey takes you and and yeah, once you start feeling 100% again, especially when you've been operating at 40, 50% on good days, you never want to get that go again.

You know, feeling 100% like, wait a minute, I can wake up and feel energized and and sometimes you don't even know what that is. Yeah. Can you kind of forget what 100% is because you've been operating, at suboptimal for so long that that your new normal is, again, you it's such a distant memory sometimes.

And when you get there, you're like, oh my gosh, this is what it's like. I forgot, how alive I can feel. You know, it's interesting. One of my, one of the, my favorite lessons from Arvada, has to do with digestion.

And it's this idea that we don't just digest food, right? We digest thoughts, we digest emotions, we digest experiences. Right. So it's like if we have trouble digesting food, physical digestion, well, that actually implies that

we're we're struggling to digest other things as well, even at the singular level. Right.

Because we have cellular digestion. Right? So it's this, it's more of this, this archetype of digestion. So when we're constipated, when we're unable to digest food, well, perhaps we this will, influence our, other aspects of our life.

So when we improve our physical digestion, then we will be able to digest, digest emotions better. We will be able to digest cellular. So everything starts to improve.

So I love what you're saying. And I couldn't agree more that as you start to make progress in one area, it, it, it inevitably, leaks out into other aspects.

It could be even finances, right. It's like everything starts to get starts to get influenced. Oh, yeah. It's a it's an onion. You keep pulling. You keep consciously being aware of an angle.

Oh, there's a lot more here I've got to uncover. This is, this is a, it's a, it's a, it's a, it's a wonderful, incredible journey. But it's, Yeah, I feel I feel very grateful to have been so sick for so long because I don't think that I would have taken the action 100%.

I'm with you. I'm with the 100%. It's not not the most fun journey, but, the most necessary. And I'm so grateful for it. I want to get into, Doctor Longo's work and what proline is doing with fasting, mimicking diets.

And it's something. But first I want to come into fasting. Right. So I think this is where a lot of, we recognize through the science the benefits of fasting.

So maybe we can start there because and also kind of better ways to do fasting perhaps for most of us. So but but what is so special about this idea of fasting physiologically, biologically at the gut level.

What's happening? Why is it so beneficial. So I think it's really important, to, to understand the history of fasting as a concept. We as humans, never we evolved from having periods of fasting and periods of fasting.

That is how our bodies physiologically came about. We never we didn't always have food available. And most of the rest of the world is like that still, right?

Like we travel to rural areas of the Western world and they're still in that environment. Sure, sure. But there's the having this in your brain is really important because your body is always and this is something I love to tell my patients to when they're feeling, attacked by their body.

Like their body isn't helping them. Your body is your body is constantly trying to keep you alive. And we have evolved to constantly try to stay alive.

And our body has implemented this process over, over the course of our, Homo sapiens history that we that we have implemented autophagy. So there's this internal process in our body that's called autophagy, where when food is not present or when it is in very low amounts, it triggers the system to activate, to then go clean up all of the sludge, all of these dead, dying cell parts that are kind of just taking up space and energy goes and recycles them, reuses them to, to make newer functioning cell parts.

And the reason it does that is because if you haven't eaten for five days and you see an elk down the street, you need to have the energy to go get that.

Elkin. Autophagy is what helps us to get there. It gives it helps you to renew your cells, to function better so that you can still have that energy to run and get your food.

That was how we evolved. Right. So fasting, you know, but it only ever activates when we have very low if not no food present. Because when digestion is happening your body will always prioritize digesting food, but above basically everything else.

So if you're digesting food, you're not going to be activating, activating this process. So autophagy is this, this really powerful? And this is actually something that, that, Doctor Walter, when he was studying, the longevity zones around the world, he realized that all of them granted, there was a plant based eating style.

There was a lot of movement. There's lots of longevity pillars that are outside of fasting, obviously. But fasting was something you saw in all of these communities, a lot of them for religious reasons.

But some of them, not some of them are poorer communities that were, were living, you know, very long live means like, what's going on here? You know, flash flash forward 2016.

Autophagy wins the, you know, Nobel, the, was it the Nobel Prize? Yes. Anyways, it's a it's a powerful, powerful internal mechanism that allows us to quite literally recycle and repair our cells that were functioning younger at a cellular level.

And this idea and concept is critical for us being able to live healthfully for a long time. And I think that's that's the difference is that we're we've gotten so good in the Western world at helping us to live longer lives, but we're getting sicker and sicker at younger and younger ages.

So I don't want to be, you know, 90 and have several co-morbidity. You have high blood pressure and, you know, cancer and, achy joints. I want to be able to hike up mount Kilimanjaro when I'm 90 and do it with ease.

That's so that's the difference between healthspan and longevity and lifespan. That, I think, is that autophagy really helps to activate. Yeah. I remember in in, Greece I was in Ikaria, which is one of the longevity regions, talking to one of the guys who was 91 or 92 or something like that, and he was telling me about his childhood.

And there is these periods because Ikaria is an island. And there was actually you could say, piracy, there's pirates. There is all kinds of, issues there.

And so they actually experienced, so they have to hide. They'd have to go up, away from the shores into the mountain regions.

## Fasting, Autophagy, and Longevity

And their food availability was super, super low, for kind of war torn areas and times. They, they would, they would lose massive amounts of weight. I mean, to the point of being unhealthy, right?

It was very dangerous. But it also the stories illustrated to me how much this mechanism, has been, let's say, put to the test over the course of, of the generations.

Right. Our bodies really know how to do this. And it's a survival mechanism that is been perfected by our biology for such an important need. And it is for those things. Right?

Whether it's famine for whatever reason. Right. Whether there's all kinds of reasons that we might have low food availability. So our bodies are really good at this.

And it turns out that, like, that's just it's such a good efficiency mechanism that if we can kind of recover, come out of the fast, that's beneficial.

The other part of this, though, is that a lot of times when we when we hear the word fasting, many people in their mind think five days, ten days, 30 days.

Some, you know, the religious process, right? That's kind of outlined in their religion. So what are we talking about when it comes to fasting? Because there's also these little micro fast that we're all doing right.

Hopefully between the hours of basically 10 p.m. and 6 a.m.. Right. So so talk to me about kind of the variations in

fasting that we might be experiencing.

Yes. And I am actually super grateful that this has become a topic of conversation because it is so important and is it's it's a secret key to really, harnessing your health goals, feeling good in your body.

I would say we that what what's happening in the conversation right now is the difference between maybe an intermittent fast, a shorter term fast and something that we call prolonged fasting.

So fasting for multiple days in a row, intermittent fasts, are generally done in a 24 hour period of time. So sleeping is is something that would be an intermittent fast, right?

You're not consuming food while you're sleeping. It's the it's the best well known, most practiced intermittent fasting type type of intermittent fasting that we that we have.

And we always talk about how important sleep is because your when you don't have food available, your body's able to clean up. And so it's goes hand in hand.

But now people are practicing longer form intermittent fasting otherwise known as time restricted eating where they might avoid food for 12, 14, 16 hours a day and then they fast for the rest, or vice versa.

So there's lots of different forms of intermittent fasting that are actually super powerful for things like insulin sensitivity, for, weight loss. Also, if you think about, you know, if you're if you're condensing the amount of time you have to eat, you're usually a lot of times people eat better food.

So there's there's this correlation between I don't have time to eat that, that, you know, sugary treat or whatever. So, there's, oftentimes people that practice this have have a, an additional benefit of consuming better, nutrient, nutrient dense foods.

Anyway, the problem or where intermittent fasting falls short because I think that intermittent fasting does have incredible daily, weekly benefits to some of these health.

But it's not going to activate autophagy. Autophagy takes at least three days, to, to even activate. And then from there you want to let it simmer in your body for a while.

So proline specifically just kind of loop it into what I, what my daily world is, is this fasting mimicking diet called proline. You are on this program for five days.

But what we've what we've seen is that autophagy, actually, it sparks on day three and it actually continues into day seven. So two days after you're done with the program.

But there is diminishing returns there. And you kind of alluded to this idea that, you know, our body will work really, really hard for us, but at the same time, it's a balance.

You don't want to you're fasting forever is not going to make you live forever. You need nutrients to fuel your body, too. So there there has to be an end to it.

And in our research, what we found is that autophagy, there's a diminishing return, pastor past day five. And you want to refit, you want to refuel after that?

But doing that a couple times a year can can have significant impacts on, things like, you know, insulin resistance and visceral fat loss and muscle protection.

We're seeing, you know, our pre-clinical trials have seen incredible benefits for gut health in terms of strengthening gut barrier, improving, the diversity of things like lactobacillus and Bifidobacterium, really great, bacteria that are healthy and good for our system.

And we're seeing, like, long term benefits, on cancer prevention and the, the impact of, of doing a form of fasting in and around chemotherapy and how that actually benefits, not only the chemotherapy, treatments, but also your recovery time.

So there's tons of tons of, massive, exponentially more benefits to doing periodic, prolonged fasting than just intermittent fasting, even though I think that both are really powerful and they both have their own unique, benefits to bring to the table.

Yeah. I mean, I think my, my baseline is some form of intermittent fasting. I mean, like our grandparents just called eating, right every day, 2 or 3 meals a day.

They were normal. Like, this is just what people did. And this is what we find in the longevity regions, right? They they eat, they eat breakfast in the morning, they eat lunch, and they eat dinner at 4 or 5 before the sun goes down and like, that's their day.

And that's a natural form of intermittent fasting. Now you can do two meals or three meals. You can compress the window. Right. And there's differences for men and women typically.

Right. Yeah. Differences for different types of people. Right. Different constitutions. So there's a lot of variation there. But I think some form of intermittent fasting in the more traditional way people benefit from that as a baseline.

Right. Just giving the digestive system a break, allowing for detoxification in the lymphatic clearing at night in the brain. Not all these things and hormonal regulation, right.

There's all kinds of food based hormones, hunger based hormones that get reset. Right. Leptin is a big one. There's all kinds of things that happen. And so just allowing that to normalize and become, rhythmic, right.

This idea of circadian rhythm, this daily rhythm, I think is really important. And then we get into our therapeutic fasting, the three day five, day ten, day, 30 day, I think, oh, quite long.

These have a wide range of benefits in and in my opinion, drawbacks. Oftentimes the benefits do outweigh the drawbacks. But if somebody like me were to go for ten or more 30 days, 21 days of water fasting or maybe even just a little bit of juice, I'm going to have some muscle wasting.

There's going to be some things that are kind of a little bit drawbacks. Now I'm gonna have massive autophagy and clean up and my digestive system is going to reset.

There are a lot of benefits, right. But this is where I think you really need to work with an expert if you're going to explore those. And for most people, in my experience, and I've got a lot of willpower, it's hard.

It's not really that feasible for most people to to try to do a ten day or 30 day fast, especially if they've got some health concerns that they're navigating in that process.

Right. So this is the reason why, when I first discovered doctor, Longo's work around this sort of idea of a fasting mimicking diet, I'm like, well, this is interesting because now you got a researcher looking at how do we structure and and modify calories and, and macronutrients, things like proteins and facts and carbohydrates and change these and modify them in this window to where we can, we can sort of get, you know, basically maximize the benefits, right.

And, and, and also still get our caloric needs met, our satiety met our sanity met. Right. Like and we can make this a doable thing right. And he did it based off of the longevity research.

You know, the blue zones, the longevity regions and some of the things that they're doing that. Right. So to me, this was brilliant in like his work. And that's what drew me in.

And then I learned about Prolog. Right. And and like, holy smokes, there's this. There's actually a structured way. They don't have to do this. Yeah. You don't have to go into like the longevity research on PubMed and like read Doctor Longo's books and have an understanding of a scientific mind just to carry this out.

We actually have some a group that's actually done this for us so that we can make this easy. Right. So to me, this is as a practitioner, as somebody, who has dealt with health issues in my life, where the rubber really meets the road is can somebody execute this thing that I'm going to give them?

I can give somebody a health plan if they can't execute it because it's way too complex or it's I'm asking so much of them, then I might as well not give them anything. Right?

It's it's so to me, this is really, really critical. And so, so talk to me about that, you know, with your clients and then yourself, how has prolonged kind of made this, this idea of fasting, mimicking and the benefits of fasting so much more doable?

Yeah. Oh my gosh. There's so many things I want to talk about. Yeah. So one is five days. It's five days in and we're not going to beat around the bush.

It is. It's challenging. It's low calorie. Even though you do get so you get this beautiful white box. And within this box there's five boxes all specific to that day.

So it's it's truly one of the most foolproof things ever. I mean, you get a little recipe card that tells you exactly what you're eating for breakfast, lunch, dinner.

It's the simplest thing in that, in that regard. And I love it because I can turn my brain off for five days and I don't have to think about food at all.

I no dinner. It's so nice. I'm like, I'm just going to go reheat my soups or, you know, now we have next gen. We don't even have to do that. But, you touched on something really important about how eating.

Yes, yes, physically, we need food and we're going to get hunger pains and probably a little bit of discomfort in that way. But I, I find that for most of my patients, it's actually the mental challenge of avoiding food.

Right. There's a there's this, just this daily habit of I it's weird not to think about food, and it's also weird not I'll tell you when I do it, because I still do these type of like water fast, juice fast and things.

There's it's like my day is so much longer. Like it's it's a really weird thing because food and food preparation and eating a food is like it's kind of like three hours of your day.

Prepare to be super productive, like time like you will get so much work done, or you'll be bored, like you're like, well, yeah, you're like, well, I'll just go clean out my closet now.

I totally, yeah, but there's this mental, there's this mental capacity or there's this mental block. I think with people where, the person really helps to give you.

That's the kind of instill that sense of. I'm getting a breakfast, lunch and dinner instead of just walking around like I can only drink water there. So there's this mental help in that, like, I'm, oh, I'm sitting down if even if I'm just still sitting at my kitchen table and having my, you know, tea and bar, I still feel like I'm doing having that pattern, those rituals that kind of help me.

## Intermittent vs Prolonged Fasting

So, but also you're, you're getting this precise amount of protein to carbohydrates to fat ratio so that, yes, you're probably still going to be hungry because it's not the same amount of caloric, needs that you typically are fulfilling, but you don't have as much of the, that strain.

I mean, you're you're like, you don't get as as many stomach pains and things like that. So that that's also really helpful. And the blood sugar regulation. Right.

Like if you go for fasting for a little bit, you're gonna have blood sugar dips most likely, especially if you don't have great blood sugar regulation insults get involved.

So just getting food in especially proteins and fats and in that way is going to help with that, that, you know, that regulation of of the most fundamental thing, which is blood sugar and insulin, and that is 100% why this is the safest option for people who do have existing and preexisting conditions, like metabolic disease or diabetes or, you know, any thing in between.

But that also is why we are superior to any other type of program in terms of muscle protection. So at the end of the day, I mean, so why do people do it?

People do it for, obviously you and I have this kind of lofty goal of I want to live past 100 and be hiking in these incredible mountains, but some people just want to lose weight.

Some people just want to in that those are those are valleys, which, by the way, if you if you lose weight, right. Like fat is a metabolic organ and the sort of bad fat, the white fat, the adipose tissue is actually, you know, putting off a lot of inflammatory signals.

Right? So just the fact that we can lose that excess weight that we might be carrying can serve our health in a huge, huge way. Oh my gosh. And there's ample studies to show that that type of visceral fat that's around your organs and abdominal section is significantly linked to chronic disease.

And versus the, you know, the fat around your thighs or the fat or in your arms, like it's specific to that central adiposity too. But the the reason that the this precise macronutrient ratio, outside of giving you the circadian patterns and you know, that mental ease and, all of that, you know, reducing the hunger pains and all of that, the precise nutrient ratio that's in this program is, is bypassing because you do get some glucose and you do have a little bit of protein.

And you it's a very dense in monounsaturated fats from the nuts and seeds and things in the bars and the, kale crackers and things like that. But you're bypassing gluconeogenesis, which is the breakdown of, of protein, breakdown of, of your muscle.

And when you come out of a program like if weight loss is your goal, sure. If you step on the scale after doing, you know, GLP ones, if you've gone up the scale after doing a very low calorie diet, even, you know, the whole 30, whatever, you're going to see a lower, lower number on the scale, but a lot of it uptake up to 40% of it could be coming from your muscle.

And when you think about your metabolic health and in sustaining these, these benefits for the long run and really feeling good in your body for the long run, you want to keep as much of that muscle as as humanly possible.

And in this program, and we've done studies and time and time again where we're seeing that muscle protection because of the precise ratio of macronutrients that are in the program.

So you're coming out with less visceral fat and most of your your muscle protected, which means that you're metabolic more active. So people on day, even day before they're done.

Day five usually people like, I'm going to go run a marathon, I feel amazing, I'm going to go, you know, we we even have a study on diabetes patients that look, that shows that people who did the FMD for diabetes management versus traditional, diabetes care increase their, their physical activity by six hours a week versus people that did traditional diabetes care decreased by 3 to 4 hours a week.

So like the motivation because your body is feeling so good can't be discounted. It's it's, it's very powerful. Yeah.

And what I like about, the fasting mimicking diet and what prolong has to offer is that it's a five day program.

Right. So it's very doable. Right? It's it doesn't feel like a marathon, right? It's it's like you can get behind that. You're like, oh, I might be a little tough.

I might be a little hungry. I'm going to miss some certain foods. No question. But it's five days and I can do five days. And what's cool about that is that it's it's kind of these, it's very progressive gains.

I would say you're going to lose a little bit of weight because only five days, you know, you're going to lose a little bit of water weight. And but like the real weight that you're wanting to lose, it's going to be a little bit.

And same thing with the autophagy and all the benefits. It's going to be a little bit. And it's but it's going to be meaningful. And then what's cool is that you can do it next month to and then next month.

So you can kind of just keep making these progressive gains. And to me, what I've seen with my clients is that they do a series of these like three, four, six and like they're just seeing these, these gains every time, and they're continuing to move forward.

And it doesn't feel like this massive disruption. It's not this like super weight loss which people then put it back on again. You're not drastically changing your world because oftentimes what comes after that is a rebound effect.

The worst place on when you started and then you feel bad about yourself, then you beat yourself up and it's like this whole psychological thing. I've watched it so many times.

And so to me, the most effective way is to be methodical, to be kind of this slowly methodical, moving forward and making progress and noticing these gains.

And again, we're I'm just speaking about what's a weight loss because it's noticeable. But we're seeing the microbiota diversity increases right. The intestinal permeability decreases the immune regulation.

The gut level increases. And you guys have research on this right. Like this is proven. But there's I think there's there's preclinical data on some of this on the gut. Right.

So you can walk me through that. What what are you guessing. So I alluded to it a second ago. But we we've so pre-clinical meaning in mouse models. For those of you aren't familiar with that term, we do have clinical trials in humans being studied.

Now we're, we're in our proline, our, our l nature health program, medical division. We have, new programs being developed for IBS, IBD, those types of conditions.

But what we've seen in our pre-clinical trials is that after the FMD cycle. So actually, to give you a baseline, every single one of our studies, except for one that I can think of off the top of my head, is looking at, as you said, the compounding effect of doing multiple cycles.

So of course you're going to see benefits after one cycle. But the benefits do compound and they are better. It's it's better when you do multiples. And most of our studies are looking at three consecutive cycles.

That vaccine works really well for three months. Yeah. That's the that's what. Yeah. Unless of course you know you get you have metabolic conditions diabetes obesity.

Then you can then our programs actually include 4 to 6 rounds in a row. And then you take some breaks for a while to get into some, you know, maintenance phase where you're doing it about three times a year, so 3 to 4 times a year, basically once a quarter.

But so just wanted to call that out that most of our studies are looking at multiple cycles, not just after one. In our,

our, pre-clinical gut studies on IBS, IBD and also Crohn's disease for instance, are looking at those multiple cycles.

And what we found was the junctures of your gut lining actually get tighter. So when you have chronic inflammation, when you have, gut dysbiosis, your gut lining actually becomes looser and weaker.

And these particles, both from inside the gut and outside the gut, can, can freely flow into your bloodstream or into your gut, and it can make you very sick and can cause additional inflammation.

On our program because of, not just, I mean, there is an increase in butyrate and butyrate helps to help, tighten those junctures from mono and unsaturated fatty acids and things like that.

But we found tightened, gut lining, which is huge, and also an increase in the beneficial bacteria like Lactobacillus and Bifidobacterium families that really have been shown to support a more robust and diverse microbiome.

Also in my in my practice, although I don't know that we have, studies yet on this, but when you're on our program and you are significantly reducing processed foods, obviously, and, added sugars and, and things like that, that can cause additional gut issues.

You are basically starving these, Saccharomyces or the, oh my gosh, Candida, type of, fungi and other types of, sugar eating bacterias that can be super detrimental to your gut.

So there's you're kind of flipping the switch on, how the makeup and diversity of your gut on in, in, just in, like I said at the beginning of the call, just five days can make a big difference.

But obviously the compounding effects are better. So, doing it multiple times a year is going to. And in my own personal journey, I, I've done probably 18 cycles of proline, over the course of the last seven years.

And my, my healing from that last bit of gut healing that I was in at the time, I probably saw the biggest benefit after doing it about six times. And then I was like, oh, I'm having regular bowel movements on prolonged.

I'm coming out and I feel like I can. I have a lot more. My rebound rate too, personally, from when I was eating toxic foods from my body was much larger, like I had a lot more resiliency when it came to those types of foods.

I mean, we hear it all the time. Bloating decreases. You know, you're improving your it's it's just a it's a whole 360 degree, impact. Yeah. And when it comes to, you know, gut dysfunctions, there's usually, a myriad of things, right?

It's there's so many aspects to what's happening at the gut. Right. So they're all affecting one another. So if you have low hydrochloric acid production, that's going to affect everything down chain. Right.

So as we start to improve the function of these of various elements at the gut level, everything else starts to improve. Right. So you know, and this is what I tend to see with no matter what the symptoms or the disease process is, I kind of the analogy I give is, is, you know, you're you're in debt.

You're you're in health debt, right?

## How ProLon Works and Why It Helps

So just like in financial debt, if you're $20,000 in debt, you can make a $10,000 payment, which is amazing, but you're still $10,000 in debt. It's not really that much different functionally because you still have no money, right? You can't buy anything you like.

You're still having to pay off. Well, you make another $5,000 payment. That's wonderful. But you're still $5,000 in debt. Keep going. So you keep making these payments, but once you cross that zero threshold, now you start to see a difference.

Oh, I actually have money and I don't have to pay. Right. So so it's like there's something that like like that, that happens with your health. It's like you cross some threshold and you don't know where that is.

In other words, you don't know how much health debt you you're in. And there's no really great way to quantify that or qualify that. So you just keep making progress, you keep going.

And at some point you cross that threshold, you flip the switch and it's and there's a noticeable difference and you feel like something changed. And it wasn't just that one thing you did, it was the five other times that you did proline and all the other things that you changed along the way.

And there you go. And once you're on the other side and you now actually have a little bit of financial, abundance, the world changes. Right? And so that's, that's what I see.

And so I agree like that consistency and, and doing multiple rounds of, of, of proline are really where the changes happen. And what I'll say too is I've had clients say, well, you know, it's, it's, it's, it's coming in a package.

Right. Like, I want fresh food, I believe eating from the garden and real food and all this, and I want to I want you to speak to the ingredients and the quality there.

But my response to that is, yes, you're right. This isn't grown in the backyard. It's not being plucked from a tree. There is an element of processed food here.

I think it's five days. And the benefits that you're going to get are so much greater than whatever this story that we have about being sort of a real food evangelist that we're telling ourselves and how important I agree, it's really important.

So do this five day thing and then go back to eating, you know, carrots and onions and, and real food that we get from the planet. So, so maybe you can speak to the ingredients and the high quality and why that was important for prolong to to consider.

That's such a, such a valid and important point. So our food is real food. It is real food. It's just change in how the format in which we're, and we're delivering it.

And also, if you guys haven't checked out next gen, we can talk about that at the end, because that's a significant improvement, I think, in how we're delivering our food.

But the reason that we've had to change the delivery of the real fruits and vegetables and real nuts and seeds that we're using in our products is because we needed the ratio of proteins to carbohydrates, to fats, to beef it.

The we are steaks on research. Right. Like this is yes, we have these things called nutrient sensing radars in our body. You might have heard of IGF one. There's PCA.

There's there's amateur. There's these these nutrients and pathways that detect when food is present. But in the nutrient or nutrition technology, this, this magnificent discovery that Doctor Walter made when he, created the fasting mimicking diet was that we could actually consume some of these foods by staying just below that threshold of the nutrient sensing radars before it will trigger the body into a fed state.

So by staying just below that, you can have foods and your body still thinks it's fats like that. Literally, we're flying under the radar. You're flying under the radar.

But the cool part about our program is that we're giving you the maximum amount that you can have without triggering the nutrients and the pathways, and that precision is really hard to do without some modifications.

Right. We had to add some fiber. There's you'll you'll, you'll see some fiber added into our, our soups and things like that to keep the glucose spikes from happening.

Happening. For instance, there's there's a little bit of protein to keep with that protein preservation. There's this glycerin drink to also help with energy and nutrition and muscle protection.

So there is this very precise scientific ratio that we have worked decades to figure out. And that's why it feels a little bit more processed. But it's from real food where we get our our olives from Italy, we get our food from a lot of them are from these longevity sites and longevity zones.

We're just changing the format to get that ratio just right. But that being said, most of our ingredients, by the way, there's a few things that we can't actually, in terms of the the, production stream, we can't there's a couple specific ingredients that we can't say is organic, but most of our ingredients are organic as well.

And our next gen, which is the newest iteration of our our fasting mimicking diet, the soups in that are completely organic and they have not been dehydrated.

So you're you're literally just eating the soups. And the flavor profile is superior in my opinion. It's it's delicious. You can eat them cold. You don't have to eat them up. You could eat them up.

But everything is, just blend it up this time instead of dehydrated and needing to be, rehydrated like you. If you've done the originals, that's what, what you'll have to do better to travel with that, though. I'm totally there.

There's pros and cons to both, and this is this is the, this is the balancing act, right? That one has to do. Because the benefits of this to humanity are so immense.

Right? So, like, it's really worth executing this. Yes. And so trying to get as good as we can, knowing that we have to keep it practical in terms of delivering this and to make it, you know, affordable, realistic and, something that people can do.

So there's a balancing act. But but I do I have long since, known and had a lot of discussions with the new L-Nutra team about how important quality is to this process.

Right. So it's not like, there's there's some stuff out there in the sort of food world that just they don't really care, you know, and it's this weight loss thing.

And there's just this is so much, it's it's so much more advanced, like, yeah, light years ahead of some of these other programs that are claiming this stuff but have no real research behind it.

They have no real, philosophy about what they're doing. Right. It's just this calorie thing and it's it's it's nonsense. So I just wanted to sort of state that because this is, this is based off of really deep research, and executing something that is designed to increase your health.

It's not making weight loss claims. It's making health claims that we're going to benefit your gut. We're going to benefit your mitochondria. We're going to benefit autophagy.

We're going to provide real physiological benefits. And and to do that, we got to use as good a nutrients and good food sourcing as we can. Right. Yeah I appreciate you saying that because we really do.

We really do put our money where your mouth is. We we are trying our best to do to use the most premium ingredients that we possibly can while maintaining the science benefits.

Well, trying to appease your palate and all, like we're working on right things and trying to make it as best. It's a lot. But we've done an incredible job in making people, and we've had over a million users who are and and, and counting people who have come to proline to, to utilize, our nutrition technology and to really benefit from it.

And are these vegetarian or vegan? Can you so we if you are strict and avoid honey, we can't say that we're vegan, but we're vegan otherwise. So we're, we're we're gluten free.

Entirely plant based. We're GMO free. We are silica free. We are. I mean, you name it, we are. We have clean ingredients in our product, and I and we're we really do pride ourselves in that, for sure.

I mean, this is this is again, it's one of the few things that I get behind when it comes to the food, side of this. And from for me, it really comes down to what's practical.

Again, the longer I've become a you know, when I started as a practitioner, I was very I was I was very hardheaded. I was like, if it's got to be this way. And I did it.

And what I realized is like, it just things have to be practical. We have to give somebody something that they can do, because otherwise we're just not going to have see the change.

Exactly. And so so it really becomes important to be able to execute something. And this is by far, the, the most successful thing that I've seen, when it comes to the dietary approach that people can follow, that they kind of enjoy doing, and, and the other part to enjoyment is that when you start to see successes, things kind of get fun.

You kind of enjoy that. When you start to see when you're like, oh, this is this is five days for me to feel incredible. Yeah, let's do it. But the thing that I'm, I know we're we're inching on time here, but the one thing that I will say that for people who are, it's important to remember that this is something that you integrate on a yearly basis, not a daily basis.

So this is an interval, a short term. It's prolonged fasting, but it is a short term intervention. And if if Longo was sitting here he he would say this to I know our our chief medical officer doctor Williams she would say this also.

But you know, in our studies that take a look at the three cycles consecutively, most of our cycle looking at that, that cycle, we're not looking at what people are doing in between cycles.

The reason this is a powerful thing to internalize is that the power of our program is the power of a program without doing anything else, right.

## Gut Health Research, Ingredients, and Practical Use

So that I'm a dietitian, obviously, you can accelerate the benefits of what is happening on our program with the things that you choose to do on a daily basis, the foods you choose to eat on a daily basis, choosing the homegrown farm, you know, grown foods every other time is incredible.

And you will go into your next fast with a much better, stronger body to to to put forward. But technically the results this these incredible benefits we're seeing are without any additional changes.

And that that when you think about the impact long term and giving people this empowering message of it doesn't actually require that much of you. It's five days out of the month and 15 if you're if you're if you've met your weight goals and you're doing this just to maintain your healthy aging benefits, it's three times you're 15 days out of your year.

It's a lot. You know, that's a that's a pretty, pretty significant, impact. Yeah, absolutely. So, you know, for me, kind of how I approach this is, you know, doing some kind of time restricted feeding or, you know, intermittent fasting.

By that, I mean, you're eating breakfast, lunch and dinner, you know, basically when the sun is up, right? That's kind of life or breakfast and lunch or lunch and dinner or whatever you kind of prefer, but like 2 to 3 meals.

And that's your baseline, right? Hopefully you're eating, organic, you know, whole foods as much as you can. Right? So that's kind of the baseline. And then you work in the fasting mimicking diet from prolonged.

You if you're trying to maintain my advice is once a quarter do it on the equinoxes. Do it I just just do it by the seasons. And it's your kind of ritualistic thing of, okay, we're going to cleanse.

We're going to reset. Right. And what you what are you resetting? You resetting the immune function of the gut. You're resetting, this sort of autophagy in mitochondrial aspects, the cellular level, you're resetting, some of your cravings that happen, right?

You're resetting the, the microbial, biodiversity. This happening at the gut level. So you're just giving your body a nice little fresh reset, you know, and then you go back to your baseline if you're dealing with symptoms, if you have some conditions that you're wanting to move through, especially if it's related to brain function, cancer, gut function, then something, you know, like doing this once a month for four, six, eight months can be a really, really therapeutic way to go about it.

Right? So and then if you are in a relatively healthy place and you can even work in some other fasting, longer term fasting, three, five, seven, ten day water fast, juice fast, these type of things.

But those that's again that serves a different purpose. Right? So for me, this sort of idea of fasting and the various ways that we can incorporate it, to me, I'd like to incorporate all these various forms, you could say, and it doesn't even really feel that hard, especially when our baseline is such.

And we can include something like, protein. Right. Because it makes it so much easier and there's a little bit of a ritualistic, fun kind of thing that happens.

I don't know, it's hard for me to explain, but it just becomes part of my routine. And I say, okay, here we are, and you can do it with the whole family, which is really what I find to be, official, right?

Me and my wife do it together and it's like it becomes our thing. Nobody has cooked dinner, right? So, it can be something that you can kind of recruit others into as well.

And it's part of their. Maybe they're not the healthiest. Maybe your husband. This is pretty, you know, stereotypical, but but common. The husband doesn't want to do anything. Right.

And the wife's trying to get the husband to do something. Well, this might be something that they can actually hop on board with because it's that easy.

Yeah, yeah. Yep. There is there is a spiritual aspect that happens to I mean you have there's a when you when you get you just wrapping around with what you said earlier, when you start to get to this place and you start cleaning up the sludge.

Yeah, you, you really do clean out some of the emotional things to you. There's a there is definitely an emotional aspect, a spiritual aspect that happens on on, which is why fasting is is such a sacred practice.

And, you know, lots of different religious, religious practices too. So absolutely. Yeah. Well, Melanie, this has been fantastic. Thank you so much for coming on and sharing all your wisdom and your experience.

Where can people find find more of you and prolon? Sure. So prolon, prolonlife.com. Prolonlife.com is where you can get prolong all of our longevity suite of products.

If you're interested in following me or as longevity dietitian, you can find me on Instagram at Healthandwellness health and wellness but prolon life.

And also if you if you are dealing with obesity, metabolic conditions, diet or type two diabetes specifically, please visit l dash Neutra health.com, which is our medical division.

Those are our 360 degree lifestyle medicine programs that do incorporate the FMD. It's a actually a different FMD. But you also get dietitian guidance, you get medical oversight, laboratory review, all of that really important, work in tandem.

So yeah, that's what I love about L- nutra prolon is that, like, they're really committed to people's well-being. This is not just, a product trying to make money, that they're really trying to make a difference.

And they're making a huge difference in this sort of integrative health world. So again, thank you, Melanie, for everything that you're doing. And for coming on today.

Thank you so much for having me. It's been wonderful.