# Mastermind Episode 2: Personalized Nutrition & The Microbiome Transcript

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## Welcome and Fall Mastermind Overview

Hi everyone and welcome back to Mimosa Longevity's Mastermind. I'm Dr. Mima Gere and today we're going to be talking about a really exciting topic that I think has so much interest these days and yet we don't really know what to do with it.

So I am going present to you all this data and some of the latest science and the topic is personalized nutrition. Let's get started. Actually, let me do this.

There we go. All right. So again, I'm Dr. Mima. This is a fall series that we're doing here on different topics related to longevity and health. this is the public mastermind that's available for the rest of the fall.

It's going to be free. And then as we go into the next year, there will be a membership opportunity as well. and that'll include more protocols and specific offerings that will unique to the Mimosa Longevity Community.

So just to recap, we have five sessions this fall from the fall into the end of the year into winter. They'll be every Thursday at seven o'clock. So you're free to join live or you can also listen to the recording afterwards than when that gets released.

This is open to the public so if you're interested in sharing this with anybody, they can go ahead and register and get on the list and they will receive the recordings as well.

As a quick recap, last week we covered circadian rhythm and food timing. Again, a very interesting topic. So I really encourage you, if you missed that one, to go back and review it.

It really is fascinating to see the circadian rhythm science and what that really represents for us as humans and how much the Circadian Rhythm biology influences every single gene in our being.

And this is all about light and light essentially turns on and off genes. inside your physical body. Today, we're going to be talking about personalized nutrition in the microbiome, eating for your gut and eating your genes and understanding your unique body type.

And then the few sessions coming up, I wanted to give you a little preview. On the 30th, we'll be really diving into detox pathways. This is important for those of you who are concerned about whether or not you might have a genomic predisposition to not detox very well.

this webinar and this mastermind is all about that. So make sure you don't miss it and really start to understand how your genes are influencing your detox pathways and we'll also look at ancient purification processes that help with detoxification.

## Why Personalized Nutrition Matters

The session after that will be going into November 13th and that is a really also very much functional medicine based mastermind, well, we'll talk about hormones and really get into the deep science around hormones, and what's important to think about in terms of our hormone biology, understanding how stress and nutrition affect the hormones.

And figuring out ways that we can actually interact with our hormones in a healthy, natural way to bring about more balance. And then last but not least, on the 11th of December, we'll be really focusing on longevity blueprint.

What are the key principles for longevity that you think about when it comes to this holistic longevity framework and

then taking that into next year where we really get into protocols around longevity science and functional medicine.

So I just wanna remind those of you who are interested in doing a detox, we have an active detox right now taking place. It's a 21 day detox. it's not too late to join.

I talked about this at the last Mastermind. We'll be covering topics around gut health, hormone balance, energy and detox sleep and recovery, weight balance and nutrient optimization.

Everyone is invited to apply to joined this program. The program includes daily rhythm guides, a weekly focus theme, live support, we'll be offering two different zoom classes that you can join in and as well as a Sunday reflection.

And it also includes the actual kosher cleanse framework. This is a Ayurvedic detox. And there's a framework around this, which includes Ayurveda and functional medicine, recipes, shopping lists, and a toolkit for getting your mind-body to reset.

We also have a WhatsApp community that is private. You'll be able to join and ask questions and feel supported with coaching throughout the program. For those of you who are interested for eligibility, it really is more of a wellness and longevity focus for those who want to increase their energy, not suitable for active injuries or acute illness, surgeries or pregnancy.

There is supplement program that is included, a detox supplement programme that's optional, as well as optional supplement testing. The sign-up information is available for that aswell.

If you sign up for this webinar, you will be receiving that in your email. Alright, so let's dive in into today's content. Again, I'm very excited to talk about this topic.

It's been really the area of my focus in terms of research, my training, and my background. I would say since before medical school I trained in nutrition science.

And it's been probably almost 30 years now of focus on personalized nutrition. And I'm very excited to share this latest research with everybody. Really, let's get into the conversation about what makes sense, what is scientifically relevant.

Let's also talk about some of the trends that are out there and maybe debunk some those trends for you right now. So when we think about personalized nutrition in the microbiome, you're really eating according to your gut and your genes and unique body type.

So let's begin with the simple truth. There is no single right diet for anybody. Okay? So if anybody says you have to follow this diet and it's the right for everyone, Wrong answer.

I'll show you exactly why that's the case. The idea that there's one perfect way to eat has dominated nutrition. Nutrition science, nutrition programs, and really nutrition marketing for decades.

This is completely false. The calories and calories out approach is wrong. We cannot just survive by eating less sugar, avoiding fat and following the latest fad, right?

So what we're learning today is essentially the fundamentals of new biology that is showing that metabolism is not a simple in and out math problem like a lot of people say it is.

It really is a conversation. It's a conversion with your body. With your mind and your spirit, I'll even extend to say that because it really has this back and forth communication.

I call it information for that reason. One of the most elegant demonstrations of this actually came from a cell biology paper, which I'd like to present to you.

This was in 2015. And it showed that hundreds of people ate identical meals. The same bread, the same carbs, same calories, and then they measured their blood glucose response.

And what they found was incredibly astonishing. It was that two people could eat the exact same slice of bread and have a completely opposite outcome.

Right? So for one, it basically moved the needle, and for the other, the glucose would shoot up like a roller coaster. Right. So here we are with two totally different responses to carbohydrate metabolism.

Why? Because it wasn't just the food alone that matters. And this is where we have to change our perspective. It's not just a food, alone. it's the person eating that food that matter as well.

All right. so we can't give a single prescription out. for a certain diet. It really is personalized. So let's take a look at all the things in this cell paper that they looked at.

This is back in 2015, right? So now we're 10 years later. Can you imagine how much science has come out? People were measuring 800 people. Again, in cell biology, they showed the microbiome matters, the blood test matter, and the questionnaire data mattered, right?

So anthropometrics, their body composition mattered. Their food diary mattered all these things went in to predict how their bodies responded to what's written up here the glycemic response.

## Microbiome, Short-Chain Fatty Acids, and Gene Expression

Right? It wasn't just one factor. All these thing went to then create a prediction on how somebody was going to respond to a diet that they were given of bread, simple bread.

Now, we're not all sitting there eating little slices of bread, but this is just a very simple study that showed even if you just look at one thing, carbohydrate, glucose, and that's it.

Not all the other factors in our diet, that there are individual differences. So now let's take that a step further and look at what JAMA showed. There's a JAMAA paper that validated that the microbiome actually was important as well.

So it confirmed that dietary responses are individualized at the level of the individual, the host, and also their microbiome. So again, it's not the individual person, but it is the bacteria that is on that person and in that that's also playing a role.

Now you're just multiplying the personalization effect. So you can see this is getting to be broader and broader. So when scientists integrated this information, like each person's microbiome, their genetic markers, lifestyle factors, they found that they could actually predict the responses that their body was having much more accurately.

And that was a JAMA article that came out in 2019. which basically proved, so if anybody is still talking about calories, you should point them to this article, it basically proves that this model of using multiple factors, including the microbiome and lifestyle, outperformed calorie counting systems.

Bottom line, right there, 2019 and JAMA. So there are many things that go into deciding what right diet is for you. It is not one size fits all. There are personalized metabolic signatures, individual patterns of how your body interprets nutrition.

Your gut microbiome plays a role, your genetics play a roll, you hormones play role and your sleep patterns all play roll. They are informing your translators, right?

So they're essentially translating how your body is storing, using energy and responding to inflammation. And even, of course, now we know the gut-brain connection, how it regulates your mood.

So again, it's really this harmony, this symphony that's taking place in the body all the time. So it is not a single factor. Here we are kind of looking at that big picture and trying to understand what are the levers?

What are things that matter when we look at the science? So here's what's so interesting is that timing matters. And I talked about this in my last mastermind.

The same meal that's eaten at 6 pm is not going to be metabolized the same at 9 pm. It produces totally different effects depending on your circadian rhythm and what's called your per two clock gene expression.

Again, this was a gene that we've discovered that shows that you're going metabolize food and fat totally differently based on whether or not this gene is being expressed.

So in some individuals, a later dinner can stabilize the glucose in others. It's going to spike your cat cortisol and trigger less sleep. So yeah, you can't say everyone should eat early, everyone eat late.

This is where having your genome can be very helpful. So knowing whether or not you have this PR2 gene expression can help you understand what your actual lifestyle plan should look like.

When we talk about personalized nutrition, we're really talking about, like I said, this dynamic relationship, the symphony that's taking place between your genomes, your microbiome, and your circadian biology.

It's a communication. That's constantly taking place. And that's what we're really talking about in this mastermind. We're moving beyond the typical labels and we are getting into the why, the how, and the body's feedback mechanism.

Because food is information. So let's talk about the microbiome and switch gears a little bit. This science has come out and exploded in the last decade, but when it comes down to clinical practice, we don't yet know how to implement it.

So a lot of times people have given up on this and said it's not really relevant, that's completely false. It's highly relevant. We just need to understand what of this information is relevant and how use it and there will be a discovery phase for the next 10, 20 years interpreting some of these findings.

We have made a lot of progress already, and I'm going to share some other information with you here. The microbiome is essentially, like we said, it's everywhere.

It's on your body, in your, body around you. But we're going focus right now on just the gut microbiomes. So the Gut Microbiome consists of about 10 to the 14 Microorganisms, that's a huge amount of organisms and you can just imagine that genome compared to the human genome, right?

The human genomes microscopic compared the microbiome genome that again is on and inside of us. So this is just the gut and that how many microbes are present.

The core mechanism that is taking place is that the micro biome is playing a critical role in nutrition. When you eat your food, Specifically, fermentable fibers like plant polyphenols go through what's called a microbial fermentation process.

Sometimes I hear from people, they're having a hard time digesting vegetables. Well, this is why. So they essentially yield these things called short chain fatty acids like butyrate, propionate, and acetate.

And these metabolize, these short chain fatty acids, then go on to bind to these G protein coupled receptors listed here on the actual epithelium and on immune cells, influencing the insulin sensitivity and inflammation in the body.

So microbiota are influencing, the bodies insulin, sensitivity, and information because of how you digest those fibers. Right? So keep that in mind. The bacteria matter.

Crossing the intestinal barrier, these microbiota actually act as what's called histone decetylase inhibitors. They increase histones acetylation and modulate gene expression and gene transcription.

Wow. Right. These bacteria essentially produce metabolites that have the ability to cross through the intestine and affect your genome. That's incredible science.

They serve as the fuel for colonocytes and support what's called tight junction integrity. We talk about leaky gut, I'm sure you've all heard about leaking gut.

Well, these actual short chain fatty acids have ability, to support this particular area of the body. and help your cells regenerate. So this is very important for healing the gut.

A clinical implication is that the production of these short-chain fatty acids that we talked about is different between different individuals, right?

So when you look at one person, they're going to have the presence of, for example, acromansia or Fisala bacterium. These are circadian rhythm bacteria.

Essentially, the host genomic variants in short chain fatty acid receptors all influence the magnitude of this effect. Again, here's another great paper very recently in Nature Metabolism that confirmed that propionate and butyrate, short-chain fatty acids, directly interact with chromatin in the DNA, increasing the accessibility of what are called promoter regions involved in mitochondrial biogenesis and cell repair.

So emphasizing the importance of these short chain fatty acids in a diet. This demonstrates that the microbiome functions as a regulatory interface between nutrition and gene expression.

Again, super important, right? We're just starting to understand which bacteria, how do we use them? What's the right balance? You know, what are different genetic factors playing a role?

Your ethnic background, your cultural factors that all play a roll in diet and whether or not you're gonna be responding well to a certain diet versus another.

We are just trying to understanding that more studies need to be done. This is fascinating science. The microbiome converts dietary inputs into molecular signals.

And these short-chain fatty acids act as epigenetic modulators with these downstream effects on metabolism, immune tone, and neurochemical balance, the gut brain neurotransmitters right here coming from this interaction with the microbiota.

So there needs to be a personalized modulation. of the microbiota that is present, right? So we can't, again, all take the same probiotic. We just simply can expect same results.

So, we need to have targeted diets, prebiotics, circadian rhythm eating, and probably targeted probiotics as well to offer a viable pathway to influence what's happening at the genome level.

So this is the future of science because we now know that this informs all disease, all diseases. You name it, cancer, diabetes, heart disease. All of it is influenced by the microbiome.

So in the context of longevity medicine, we're really thinking about how to optimize this microbial signaling that's taking place to reinforce cellular resilience and metabolic efficiency.

Now let's move on to what is happening in terms of the mechanism of short-chain fatty acids. So short chain fatty acid themselves are illustrated here, butyrate, acetate, propionate butyrate.

They're right here on the outside of this cell and they're influencing what are called these GPR receptors. They

represent one of the most important signaling bridges between diet, microbiome activity, and host physiology.

is known because it serves as a primary energy source. It supports this barrier function and it goes, again, beyond the gut. it has these microbe, these mitochondrial effects, what's called CERT-1 signaling that's responsible for stress resilience or stress resistance and also insulin sensitivity.

Short chain fatty acids also affect T regulatory systems. So we're talking now about immune function modulated by short chain, fatty assets. Again, a dietary thing, something we can take in our diet and influence all these beautiful downstream effects.

So there is a cross talk between the epigenetic factors that we've talked about and the endocrine system.

## Circadian Timing, Fasting, and Microbiome Diversity

So again, another beautiful paper, the FEMS microbiology letters in 2024 showed that these butyrate and propionate molecules inhibit the HDAC activity, increasing the histone acetylation in epithelial immune cells.

We know that this is how epigenetics is taking place and how we modify genes. So this goes back to this concept that genes aren't everything. It's not just the genes, it's also what we call epi-genetic, which is what's illustrated here with the histone acetylation, the changes to the jeans that are influenced by your lifestyle, your diet, meditation, and other holistic practices, nutrients, et cetera, that can actually affect the expression of those genes.

It's not just what's coming from your parents. You can actively modify and change that with these methods. Now let's talk a little bit about circadian rhythm and fasting and how that plays a role here.

So we know that these microbial short chain fatty acids follow the circadian rhythm. I said that a while ago. They peak during the daytime feeding window and they decline overnight.

Going back to what we talked about last week, Eating overnight, not a good idea. Working late hours and staying up overnight not good for your microbiome for this exact reason.

The rhythm is synchronized with host clock genes. So the PER2 we talked about earlier in this mastermind but also clocked genes and BMAL1 gene forming what's called a bidirectional loop between the microbial metabolism and the host, the individual's chronobiology.

So we get this back and forth communication because of these genes and the connection to light. Fasting periods will actually amplify the short chain fatty acid efficiency by improving receptor sensitivity and increasing microbial diversity, particularly in specific bacteria like acromansiae when we're focusing on longevity.

So fasting, in other words, is beneficial, again, at the right time, the the period of time and I'll talk about soon in the Right Body Type. So in practical terms, optimizing your short-chain fatty acids, we talked about all these beneficial effects of these, includes diversifying your fermentable fibers, so inulin-resistant starches and arabinoglycans, having more polyphenol-rich foods that feed these short chain fatty acid bacteria coming from plants, right?

And then fasting windows of at least 14 to 16 hours to enhance the metabolic rhythm. And then circadian meal timing, making sure you align your microbial and host expression with the sun, with light.

So from a clinical standpoint, we're often using tests to understand this. Some of these are more research-based than others, but we are using stool metabolomics, metagenomic sequencing, And we can target nutritional interventions to start to map and modify just simply short chain fatty acids dynamics in real time.

This is just one set of metabolites, right? Now you can just imagine if you amplify that out to all the other things that we have yet to understand and study.

So all these things are important. Now let's talk a little bit about microbiota diversity and individuality. So going into

understanding this concept, we examine, for example, in this paper, two individuals that can consume the same diet and experience completely different outcomes, one that's thriving and the other that becomes symptomatic, only because of the microbial diversity and composition being different between them.

So no two microbiomes are identical. Even identical twins, they examined and did studies on this, only about 30 to 40% of twin microbiota in the gut are actually overlapping, right, in identical twin.

So there's a diversity here or a lack of diversity that can also exist depending on what's happening in your body. And that diversity defines how nutrients, toxins, hormones, are processed and how resilient your body is to stress.

So this microbiome variability and function is what also determines your energy extraction, the production of metabolites, like the short-chain fatty acids we talked about, also bile acids and neurotransmitter precursors.

And your detox capacity, your body's ability to include degradation of xenobiotics, like environmental toxins, and also build up of estrogen. So when our body is going through stress, we actually build out more estrogen metabolites that need to be detoxified.

And the microbiome plays a big role here. And then lastly, the barrier integrity. So we talked earlier about intestinal permeability and how leaky gut is one of the things we're often diagnosing in people and that is influenced also by the specific microbiota.

And that determines what amount of toxins your body ends up taking in because that barrier, integrity can be compromised. When it is compromised or when you have a reduced diversity, you develop something that we term dysbiosis.

In Ayurvedic terms, it's called AMA. Western medicine is called dysbiosis. Dysbiosis has been associated with insulin resistance, autoimmune activation, neuroinflammation, and accelerated biological aging.

So again, in practical terms, if you have low microbial diversity, you can actually have a reduced capacity to produce butyrate and greater intestinal permeability.

And then really, that's when we get into diabetes also, because you've exaggerated postprandial glucose and lipid response even to healthy foods. So getting back to like your gut actually informs a lot of things beyond your genome.

It's the microbiota that kind of have a mind of their own sometimes and influence your glucose and your lipids. So let's take a look at a case, you know, there's some divergent responses to the same diet.

So we look back at this cell paper and the jam paper, and it clearly demonstrates that two people could eat the Same carbs. We talked about the bread and how different they are.

And we looked at the actual taxa, the microbiome, such as bacteroidities or pervitella. These species of bacteria are linked to carbohydrate metabolism and inflammatory signaling.

So we can identify specific bacteria that are saying, I want more carbohydrates, and they're getting you to essentially crave and eat more carbohydrate so that they can be fed.

Just a simple example of something that was discovered, again, a decade ago. So microbial identity is very important, not just a caloric account, in predicting the outcome for nutrition.

Now let's talk about some of the other theories and the ideas that are out there when it comes to dietary paradigms. We talked so far about caloric intake, we demonstrated how important it is to look at the different individuality, the genome, microbiome, and how we have this individual response.

Now, let us talk some other ideas about how this fits. So right now we have quite a polarized environment when it

comes to nutrition, and honestly we always have had a polarised environment for nutrition.

## Diet Paradigms and Individual Responses

It's been like this since we started talking about nutrition but it's time for this to start to change. If you look for example at the lectin-free diet concept by Dr.

Gundry, when you at look at actual individuals, you'll find that they have an HLA-DQ or IL-6 promoter variants. So if you have these genes present, they're going to have lower levels of what are called lectin degrading bacteria.

So this is one example, lactobacillus plantarum. And these individuals actually would benefit from having the spectra repleted. And so others can have robust microbial degradation pathways and tolerate legumes and nightshades without issue.

So again, it's not a one size fits all. If you don't have this particular phenotype and genotype, you likely will be able to metabolize this food just fine.

So I really caution people when they say they can't eat something. We have to understand why, we have understand what's happening in your genome. We have to experiment and see which bacteria might be present and what we can actually replete and then reintroduce some of the foods that you might have been reacting to before and seeing what your body does.

It's a conversation. Another common diet right now is the carnivore diet or also the zero fiber diet. Now, these diets can be very effective because they are essentially stabilizing symptoms.

So you'll have people that are reacting often to fibers or reacting to foods and they'll go to the carnivore diets because their stabilising their symptoms and feel like it works compared to everything else they've done.

Well, they temporarily stabilize the symptoms in individuals that have overgrowth or immune dysregulation by lowering an antigen exposure, right? So yes, you know, in many individuals that a certain dysbiotic presence or genetic influence, they will be reacting to certain vegetables and certain fibers.

However, it's not just the meat that causes the change. It's the fact that you're removing the input of the antigen and you reducing inflammation by doing so.

But in the long-term, I caution people on diets like this because prolonged restriction reduces what's called Fisalar bacterium and Rosiburia species.

And these guys are the ones that produce short chain fatty acids. Now we talked earlier, the whole first half was all about the importance of short-chain fatty acid in the research.

So you really look at this, you know, in a logical manner, is this a proper diet for longevity? Likely not. We're potentially compromising long-term mucosal health in exchange for reducing inflammation in short term.

Next, there are other diets that are looking just at fruits and vegetables and saying this is the only answer. Again, this can support detoxification in individuals that can have sluggish biometabolism.

So these are people with this particular genotype or slugish sulfur metabolism, so CBS variants, but they promote glycemic and oxalate issues. for those with these other polymorphisms.

So you really have to customize and individualize. And I realized as I started to study the genome and understand individual differences, that when you have the power of your genome, you can actually understand what your SNPs are.

What do they look like? You can start to decode this information for yourself and again, have a conversation with

your diet, your body, and start to discover what can be actually taking place.

So again, each paradigm can and correct depending on the individual's host genome and microbiome profile. It is not one size fits all. We really have to look at the individuals and we have look long-term benefits.

Is this the right diet for short- term or right for long term? And remember that circadian and environmental modifiers play a big role here, right? So the microbiomes composition is dynamic.

Sleep disruption, meal timing, antibiotic exposure, that is critical So many people have been exposed to series after series of antibiotics throughout their life that is going to disrupt your microbiome.

They say seven to 10 years out sometimes, that's not saying don't take the antibiotics, it's saying we need to replete the microbiomes after antibiotic exposure.

And also in the elderly population, to increase lifespan and longevity, we really have to think about repleting that microbiom and keeping that structurally active as well for the gut.

Chronic stress, I can't emphasize this enough, rapidly alters your microbiome ecology. You may think it's no big deal to gun for a deadline, but while you're doing that and you not eating well and not sleeping well, you are affecting your micro biome.

So in animal models they showed that circadian misalignment alone shifted the firmicutes to bacteroidities ratio within just two days, right? So very important that you have this relationship that's taking place.

It doesn't, you know, it's not like other blood tests like hemolymina A1C where it takes three months to show up. We're talking about immediate changes with the microbiome, almost as immediate as a glucose change when you eat something.

So this underscores why interventions have to include timing, rhythm, an environmental context in addition to food. Okay, so we need to think about how to apply this clinically.

So from a longevity standpoint, the goal is not just to adopt a universal diet, it's to restore the adaptive microbial diversity. And that's really characterized by at least these three things right now based on the literature, a high functional redundancy, So multiple taxa specific bacterial groups that are supporting the same pathway to create redundancy stable circadian oscillation and the microbial gene expression.

So circadian rhythm, we talked last time that the body has its own clock chains that can get turned on and off. So do the microbiome. The microbiota have a circadian rhythm and they also get turn on an off as well based on light.

Keeping that stable and a regular pattern is so important. What time do you go to bed? What do time you wake up? We can't travel and change different time zones all the time and expect that there's not going to be a physiological response, science is showing that that happens in any case.

So there will be consequences on the microbiota. And then a balanced immune communication across the gut and brain axis. That's the third component that is essentially something we want to restore when it comes to longevity.

So the key insights here are that diet is only the visible half of the equation and the invisible half is what's happening with the microbiome that we sometimes need to test and understand.

Our tests are even getting better. We can now do whole genome sequencing. It's still not really accessible for everybody yet in terms of microbiomes, but we're gonna get there and it's gonna happen within the next decade for sure.

and determining how that diet is interpreted. Precision nutrition begins when we start mapping all of these things. And let's talk about the genes.

## Genes, Epigenetics, and Ayurvedic Body Types

So for those of you who've worked with me, you know how I work with the genome. This is a big part of my practice. I find there's a lot of power in understanding the genomes, and especially when you start to bring in all these other variables and understand how they're influencing the clinical picture.

So just a quick overview of the genome with the time that we have available to highlight some of key pathways, the methylation pathway, fatty oxidation pathway carbohydrate metabolism, glycemic control, inflammation and immune reactivity, histamine and biogenic amines.

These are all current genes that are well described in the literature that can be used to develop individualized, personalized programs. They're ones that I use all the time with my patients.

And I love working with these because they give you so much insight into why symptoms are taking place and offer alternative pathways in how we can provide protocols for healing symptoms.

And remember, there's this interplay right between the genes and the microbiome. Just to give you some examples, the FTO risk allele that many of you may have heard about, F-T-O gene, this particular alleol is associated with obesity and it's moderated by gut diversity.

So that's where Acromancie became so famous and well-known because of this gene-microbiome interaction that we discovered. Likewise, MTHFR-related methylation deficits are amplified under dysbiosis.

This is something that a lot of people don't know. So the MTHFR gene is actually amplified when you have a dysbiotic gut. And so stress responses, inability to detox properly, cancer risk, all of this is modulated by this Mthfr pathway, and that's amplified by dys biases.

There is this bi-directional relationship that supports this idea of a holo genome, the idea that the host and the microbiome genomes function as this integrated biological system rather than separate entities.

Of course, right? But yet we haven't been functioning that way. in medicine, the science is showing it, and it's time for us to start practicing that way in our nutrition, in out medicine and our wellness and in in lifestyle.

So circadian rhythm and epigenetic integration is so important as well. We talked about this in the first series, so I'm not going to get into this too much detail, but I just want to make sure that we don't forget that part as And we want to align our nutrition with our genetic architecture.

That is really key. So thinking about this overall loop, right? We've got this diet microbiome epigenome loop that's taking place. The diet shapes the microbiomes, the microbial metabolites shape the epi genetics, Right?

The epigenerics go back and influence the genome. Right. This is how we can actually start to build resilience and influenced our genetics. And it gets disrupted through lifestyle patterns, through behavioral patterns.

Stress patterns again, those have also a genetic influence and a trauma influence. So stress, processed foods, circadian misalignment, they create metabolic noise.

And restoring this rhythm and microbial diversity is what creates coherence. So we talk, you know, I love talking about consciousness and coherance as part of the biological framework.

At the molecular level, enzyme systems show quantum coherense and electron tunneling. The mitochondria operate as resonant biooscillators. And the vagus nerve, the relaxational nerve in the body, is involved as well as your heart-brain coherence.

to directly influence the mitochondrial signaling. So all practices around meditation, coherence, heart rate variability, consciousness realms, these are all important to activate and deactivate some of these mechanisms and

influence vagal tone and digestion.

We're still studying how this works, but it's very promising. And this is why, because it actually has been shown in research and it is fascinating science.

Now, before we end today, I want to take a couple of minutes to talk about the Ayurvedic framework and how that's important here as well and show some of the recent science, especially for those of you who are involved in the Kosha program that are interested in working on AyURveda with me.

I love presenting the science behind AyUrVeda because it's a 3,000-year-old system that is highly relevant in terms of things we're talking about today.

So this concept of constitutions in Ayurveda, vata-pitikafa constitutions, air, fire and earth, these are very important elemental frameworks of body types or body constitutions, and they are directly correlated with microbial profiles, as well as physiological traits.

So let's do a quick map for those of you who are in the program who want to understand this a little bit more in our one-on-one work together. Here's how it works.

Vata is air and ether, right? So those are the two elements that go into vata. The physiological traits of Avata type is variable appetite, light body type, that you lose weight quickly, and irregular digestion.

So that means sometimes they're constipated, sometimes their have diarrhea. It's never consistent and sometimes, you know, things come and go quite quickly in their bodies.

So what's been proven and is so fascinating is that they have a lower abundance of this particular bacteria from acuities, reduced short chain fatty acid output, and increased gut permeability.

So the Ayurvedic focus is often to have more warm grounded foods, oily foods and reconstituting the mucosa. Again, this is an ancient science. They always had these treatments, but the science is now showing that we can map it back to bacteria and the genome.

Pitta, which is a fire type, have a strong appetite, heat sensitivity, they get overheated, and a tendency to be inflamed. Now these folks are dominant, not lower, but dominant in their firmicutes and compared to the Vata.

And they have a reduced acromanciae during stress. So their antidote in terms of the fire is cooling anti-inflammatory phytonutrients, having more greens, turmeric, aloe, and stabilizing that cytokine expression in term of their treatment.

And last but not least is CAFA, which is the earth and water type. This has a slow metabolism, more fluid retention, and lower motivation. These folks have a lower diversity in their microbiome and a higher F to B ratio.

So their optimal diet is light, rich in spices, and usually will need to have those early dinners we talked about and enhancing their metabolic rate and microbial diversity because of the natural low diversity.

So again, ancient science and our ability to apply modern medicine and create personalized protocols for individual types based on their microbiome. So these patterns reveal that Ayurvedic observation can actually form these functional clusters, and that's aligned with their nutrition.

So the key focus areas as we wrap up today is that there is this biological communication. Every bite of food that you eat is having a rule set. I'm sorry, not a real set, but a language communication that's taking place and it's carrying data.

So your microbiome is translating that data into metabolites and your genes are interpreting those metabolite and expressing those patterns. Your circadian rhythm synchronizes those pattern into a coherent rhythm of repair,

energy production and understanding or cognition.

So when we think about longevity, it's really important to remember these particular things. One, personalization outperforms prescription. Number two, rhythm is as important as content.

So when you eat, how often you need, right? That rhythm of it is important, as what you're eating. Microbial signaling is a therapeutic target. Genes provide the blueprint, but they're not the final verdict.

And there's an integration of ancient and modern models that enhances our precision. So remember that nutrition is not linear. It's rhythmic, relational, and responsive.

Finally, I'd like for those of you who are watching this, either afterwards in the replay or here live right now, to do this integration practice. I recommend maybe taking seven days and recording a food, mood, digestive journal.

but framing it through this additional lens, which I teach within the kosher program as well of circadian rhythm and genomic awareness. Your meal timing and the composition should be recorded every day on these seven days journal, right?

When you eat, what you Eat and how you combine certain macronutrients are all important.

## Food Journaling and Closing Takeaways

So record that for seven Understand what your energy is doing. Notice after the meal, within 30 minutes, are you a more alert? Are you more focused? Or are more fatigued?

That energy curve provides a lot of information. Understand your digestive patterns. Watch when you eat things. Are your bloated? Was that a comfortable meal?

And are going to the bathroom regularly? How are your emotions and your cognitive shifts? Food influences our emotions. Track your mood stability. Look for clarity versus restlessness.

Those are key signs. Watch your sleep and fasting windows. Document the intervals between your meals, your bedtime and waking energy the next morning.

We actually have a whole framework here in the kosher program that I teach people and we have, um, a way to document all this information. For those of you at home, you can do a seven day food journal and write all these things down and start to reflect on this for yourself and identify whether this is a supportive pattern, something that enhances your clarity and energy and comfort or a disruptive pattern that consistently creates imbalance.

Be aware that the entry point into precision and self-regulation is so important because awareness dictates all of it. And the practice turns into science when you start to experience this, right?

So turn it into a real experience. Transform the data into what's called embodied vision so we can have consciousness in how we approach longevity. So finally, I'd just like to close and reflect that longevity is not about restriction.

It's about resonance. Its about creating coherence and resonance in your body, your mind, you spirit, connections around you, and your community, whole life.

When your genome, microbiome and daily rhythm operate in harmony, You unlock a level of efficiency that is no supplement, it's not a protocol. It's really truly this amplified level, of peace and harmony within your body and around you.

And that harmony is the foundation of sustainable health, creativity and vitality. So again, I'm Dr. Mima Gere and thank you so much for attending today's mastermind.

I just want to remind you that our next master mind is going to be on October 30th, where we'll be diving more into detox pathways for vitality. We'll focus on the gut, the liver and the lymph systems and genetic influences on these pathways.

Looking at simple food based detox strategies, we can start to apply as well as rituals like breath work, ceremonies and herbal teas that support cleansing and will end with a detox visualization and guided breathwork practice.

So I encourage you to join next session live if you can, but if can't it will be available like this one over recording. And this session, like our others, will end up on our Monza Longevity page, which is going to be on YouTube, as well as on the Substack.

So those of you who haven't had a chance to sign up, Monzo Lungevity has both a YouTube as, well, a Substacks so that you can stay active and stay current in all the information that's being released.

Thank you so much for following along today, and I'll see you in two weeks.