

## Episode 94 Transcript

Jaclyn (01:25.518)

Dr. Marcus Cirelli, a Life University graduate, is trained in functional medicine and clinical nutrition through Functional Medicine University and Southern California University. He is also a certified gluten expert. Practicing in Cleveland, Ohio and offering remote consultations globally, Dr. Cirelli specializes in identifying the root cause of chronic conditions like autoimmune diseases, thyroid disorders, fibromyalgia, chronic fatigue, digestive issues, heart disease, and hormonal imbalance.

Really excited to have you here today because I think we're going to talk about one of those root causes that you probably uncover quite a bit with the connection with all these chronic diseases, which is gut health. So thank you so much for joining me today. You like to tackle the difficult cases right off the bat, don't you?

Marcus (02:05.827)

Thanks for having me, I'm excited to be here. Yeah, it's always been a kind of passion of mine. Really, it stems from like my own health issues. And I feel like most probably practitioners in the space are kind of the same way. They've had, you know, chronic health issues of their own. And that's kind of what led me to functional methods to begin with. So I always joke around, but I'm serious when I like to take those hard cases because it's often the patients that come in, they've been to two, three, four of the practitioners by the time they come to my office. So it's really diving deeper, figuring out what's going on. But it's also very rewarding too, obviously to be able to solve those cases for people.

Jaclyn (02:38.926)

Yeah, I love that and I'd love to just chat a bit more about that because I think that it can be so frustrating as a patient when our systems are broken apart and you see all these different specialists who look at it from a single point of view. And I know I've had the experiences where patients come in and, you know, from your point of view, from functional medicine paradigm, the root cause can be pretty clear. And when you can unlock that, it's like remarkable how fast people get well. And I think it's just such an interesting experience to get to walk a patient's side through that process.

Marcus (03:13.123)

Yeah. And I agree with you a hundred percent, especially now medicine so compartmentalized or so there's a specialist for this and this and this, but no one's really looking at that whole entire body, which is exactly what people need, especially nowadays. So, um, I think we need more practitioners like that, but that's just my opinion. Um, but

yeah, you can't, you can't separate the body and individual parts when they all work together.

Jaclyn (03:29.186)

Definitely.

Jaclyn (03:33.43)

Yeah, so today we're gonna talk about really one of the pinnacle, like kind of cornerstone keystone systems that does really touch all different areas of the body. So of course we are a hormone health company. We love to talk about hormones. We'll get to hormones, but I wanna talk about gut health today and the implication and impact that gut health has across hormones and other areas of health because the connection point is huge. So can you start by just explaining like why do functional medicine doctors care so much about gut health?

Marcus (04:06.113)

Yeah, when we look at the gut, mean, like you said, it's connected to virtually everything. So every organ function is directly impacted by the gut. So whether it's hormone health, whether it's brain health, cardiovascular health, you name it, there's some kind of connection there. So that's always where we tend to start with patients in our office. We love to do certain tests, which I know we'll talk about that. That dives a little bit deeper to figure out what's going on, but really looking at that microbiome is kind of the big picture, which is the balance of the good and bad bacteria in the gut.

And once we can positively impact that, you're going to see things like hormones clear up, brain health clear up, cardiovascular issues clear up. So there's just so much connection there with the gut microbiome itself. And that's why, again, that's why we start there first.

Jaclyn (04:49.198)

Well, let's talk more about that with the microbiome. Why does the microbiome matter so much? Like how is it connected to things like hormonal health, cardiovascular health, brain health, et cetera?

Marcus (05:00.943)

Yeah, so hormone wise, the estrobalance is a big one, obviously, I'm sure you know about that. But looking at estrogen metabolism, so that gut bacteria in the gut is actually going to influence something called beta glucuronidase, which is the enzyme that actually helps metabolize, break down estrogen. So if that's not working correctly, we'll see things like estrogen dominance show up. From a brain health standpoint, about 90 % of our serotonin is made in the gut, 50 % of our dopamine is made in the gut. Those are going to directly impact the brain.

Thyroid health wise, about 20 % of our thyroid hormones activated in the gut. So there's this huge connection. I mean, I can go on and on and on with all these different examples, but those are kind of the big ones from like a hormone standpoint, thyroid standpoint. Even insulin, we know that the bacteria in the gut directly impact our insulin levels. So when we talk about things like PCOS, we obviously want to make sure that the gut bacteria's balance help with those conditions as well.

Jaclyn (05:54.798)

Now when you're working with a new patient and they're coming in with a kind of complex chronic disease or hormonal imbalance Do you look at gut health for everyone or do you look for certain signs and symptoms first or can it be kind of a hidden? dysbiosis or a hidden problem

Marcus (06:09.219)

A lot of times it's hidden. So it kind of depends on the patient. Obviously, like I said, there's a lot of patients who've come in with previous testing or seen other practitioners. So they may have already had some testing done. Um, so we don't necessarily repeat those things, but I do like to run stool tests on virtually everybody. Um, especially those like chronic conditions, those ones that like the chronic hormonal imbalances or infertility cases. Um, cause you can, a lot of times what I often see is it's these hormone cases or these fertility cases. It's there is some kind of underlying gut component that is often missed or not even tested for to begin with. And that could be like hidden parasites or pathogens or whatever it is that's actually blocking fertility from having to begin with. So not everybody gets a stool test, but I would say probably 90, 95 % of people come to the office do.

Jaclyn (06:54.584)

Do you want to share which test you like to use? We got a lot of providers I know they're going to ask.

Marcus (06:58.881)

Yep. I love the GI map personally. That's just, I feel like the best tests out there. know there's other, Genova makes a great test too. I don't mind their tests at all, but I just prefer the GI map tests. I think it's very clinical to the point, shows what you need to show. The only thing with any gut tests that it's hard to pick up is things like parasites in yeast. That's only downfall with some of these, these gut tests, but I do love the GI map tests. Again, I think that's the best one. I've been using that one for last eight or nine years now, we get really good results.

Jaclyn (07:31.864)

I love that test too. mean, there's a lot of companies, like you said, who have really great functional labs. I'm actually really glad you bring up the yeast piece too, because it can come back negative on a lot of the standard stool tests, because it can take so long to grow and to replicate. So sometimes it's not picked up. Although with the PCR-based tests like GI map, you do pick it up a little bit more often if it's present there.

Marcus (07:54.211)

Correct, yeah. And then I also love the organic acid test for that. That's another good one to look at for a yeast standpoint. So we do suspect that in a patient, then that's something else. Hey, let's maybe add this test on to make sure we're not missing anything from that standpoint.

Jaclyn (08:05.72)

Can you share what organic acids you're looking at specifically?

Marcus (08:09.027)

Dermavitol is the big one. We use the Genova test for that. There's three different yeast that are measured on there, but from a Candida standpoint, that's what we're looking at to figure out if there's yeast or fungal overgrowth.

Jaclyn (08:22.606)

Great. So when it comes to gut health, when you're looking at the connection with gut health and hormonal health, is it predominantly a microbiome issue? Like you mentioned the beta-glucuronidase or other aspects of gut integrity or absorption or anything like that that you are also wanting to make sure you're looking at?

Marcus (08:41.643)

Yeah, absolutely. So absorption wise, making sure all the organs are working appropriately. So liver, stomach, gallbladder, pancreas, those things all work in the right way, actually absorb the nutrients you are eating. The test shows us that looking for any kind of hidden parasites or pathogens, which again can cause all kinds of different digestive issues, looking for things like leaky gut. So making sure that there is nothing that's leaking through getting to the bloodstream that can cause chronic inflammation in the body.

Jaclyn (09:02.541)

Hmm.

Marcus (09:10.243)

That's kind of the big ones we're looking at, but I mean, then obviously we can look at other things too. Like there's a marker on there for like not celiac disease, but going to be more for gluten sensitivity. So making sure there's not a gluten problem too, for patients.

Jaclyn (09:24.43)

That's cool. You know, I also learned from one of the docs on the GI map team that when that's elevated, it can be like non-specific. It can be for gluten, but also the anti-gliadin antibody can indicate kind of just a reactivity generally in addition to gluten, which I thought was really fascinating and helpful. Yeah. So tell me a little bit more about when, a patient comes in with hormonal complaints, you know, you do this stool test, let's say it comes back with, you know, some maybe...insufficiency, dysbiosis, or some kind of pathogen, what are the next steps for that patient? And I'd love to talk about, like maybe we should step it back a little bit. How do you look at that when you're looking at a patient from a holistic point of view? Because if you have a patient with hormonal problems, we know you use the Dutch test as well, like how do you look at multiple points of information and kind of bring it together for the patient?

Marcus (10:15.351)

Yeah, that's where it can become challenging because it can be over, you know, information overload for a lot of patients too. so it really comes down to the patient and what they're willing to do. So we always ask them, you know, how many changes do we want to implement at a time? what are you willing to change from a dietary standpoint? So that's where it really comes down to the individual. cause we could, I could run 20 tests on somebody and we have all this information, which is great, but it's like, okay, what are we willing to do? What, where can we start? so the biggest thing we kind of drive it off their chief complaint.

So if it is, hormonal case and obviously we're running like a Dutch test to figure out what's going on from the hormones but implementing small things in like dietary changes that could help out with you know liver detox or if it's a dysbiosis maybe we can start incorporating from into foods just small little changes up front and then I kind of tell people to you're like an onion right as we start to go back layers we'll find more and more stuff but that means we can also implement more stuff too so I always try to start with less is more when it comes a lot of these cases and people often feel better with less things. I had a patient came in last week, she was taking 38 different supplements at one time a day, which was, in my opinion, insane. We took her off everything except for four things. She already felt better, which no surprise, so yeah, it's really, it's really going to come down to the individual again, what, what are they willing to do? What do they want to do? How quickly do they want to heal? So that's where it really, again, kind of figuring out their pain points gives us a good starting point.

Jaclyn (11:37.6)

I love that because you're really individualizing for the patient, right, because it's a matter

of, you you have to meet them where they're at. And I will just say, it's like you see so many patients who come in with literally shopping bags, like grocery bags full of supplements. And I don't know if you find the same thing, but when you ask, well, you know, this vitamin E, why did you add vitamin E? And they're like, I don't know. I read this article once and I can't remember what it said, but I remember reading and thinking that would be really great for me to add. So I added it and the list just becomes

Marcus (11:41.101)

Correct.

Jaclyn (12:05.42)

So long, but there can be interactions. You can get too much. And it's just a lot for your liver. Like, you know, there is too much of a good thing. Yeah.

Marcus (12:10.627)

Absolutely. Yep, absolutely. Yeah. And then people will start a supplement from another provider and then four years ago, they never stopped. They kept taking it and then they've been taking forever and then, you know, spending a thousand dollars a month of supplements, which is insane. yeah.

Jaclyn (12:24.3)

Yeah, and it gives you taking them off, you get a new baseline, is great, particularly with digestive issues because a lot of supplements can cause loose stool, constipation, et cetera. So that's a great, great place to start. So let's talk a little bit about hormones and the microbiome because the microbiome can also shift in response to hormonal change, right? So can you talk a little bit about like menopause and menopause women go through this change, they experience, you know, hot flashes, mood swings, weight gain. Are there ways that the gut microbiome impacts these symptoms during menopause?

Marcus (12:59.041)

Yeah, so we now know that, you know, as a woman transitions through that phase, it does directly impact the microbiome from a negative standpoint, can actually decrease diversity is one of the biggest impacts that it has. So you can see things like dysbiosis show up, which can impact again, any system in the body. It can also impact organ function. So in particular, the liver, so we can see detox slow down a little bit, making it harder for women to actually get rid of toxins. So that's actually recirculating the system and cause other, other problems.

And then the slowdown too can actually slow down the speed or the motility in which things move through the gut. So we can see more constipation starting to creep up there too. So there's a lot of different changes that a female will go through on top of hormonal

issues and you throw in the gut component too. So I always joke that you guys always get the worst stuff and guys have it so easy, but it's the truth.

Jaclyn (13:48.93)

Yeah, I won't disagree with you there. Yeah, it's interesting, but there are times like in pregnancy too, there's a complete like a wiping of the microbiome in the gut. And in fact, if you test them and like the diversity is very, very low, it looks a lot like metabolic syndrome patients and obese patients, which is so fascinating because I always think, is it evolutionary? Because it does come back at the end of pregnancy, but you end up absorbing so much more glucose from the gut and nutrients, get hyperpermeability, which is probably a good thing because you're trying to get as much as you can out of your food.

Marcus (14:25.175)

Yeah, that's the biggest thing I see during pregnancy too is that leaky gut or the hyperpermeability show up there too. sometimes females were developed food allergies that they didn't have prior to pregnancy. Now they have them because of that component too, which never a fun thing. But like you said, that diversity does come back once baby's born and things kind of bounce back out.

Jaclyn (14:39.82)

Right. Autoimmunity too, actually, because it can kind of come or be relieved in pregnancy, which is so interesting when you think about all the microbiome changes. I love that you mentioned like beta-glucuronidase and also the change with toxicity because beta-glucuronidase is obviously, you mentioned this, it causes resorption of estrogens and other toxins actually too, recirculation of anything that gets glucuronidated to be eliminated.

Maybe you can share a little bit more about that during menopause. Like how big of an impact does that have or is it more impactful in cycling patients?

Marcus (15:17.467)

Yeah, both. mean, definitely both. I mean, I would say probably more with the cycling patient. but you're going to get both those. And there's a lot of things gut component wise you need to help support that too. Right. I mean, we can focus on software containing foods as a big one. certain supplements like glycine is great for that. working on consuming more prebiotic foods, making sure we get enough probiotics, whether it's through supplements or dietary changes. So, you know, whether you are cycling or you've gone through menopause, there's a lot of different things from a gut standpoint that you can do to help balance those things out too.

So we always try to work on incorporating more cruciferous vegetables is a huge one with every female, minus thyroid issues. We try to work on making sure we're eating some kind

of probiotic rich food, whether it's sauerkraut, kimchi, maybe a little bit of raw cheese, something along those lines, making sure we're getting enough prebiotics. So onions and garlic and bananas. So there's a lot of different things that you can work on anytime during your cycle or your phase that will help out with these things too.

Jaclyn (16:15.436)

love that you focus on that kind of whole foods approach first because it's so important to have that foundation there. Tell me a little bit more about like when you're working with women with hormone imbalance, are there some general lifestyle recommendations you make on top of nutrition? Or you can add more to nutrition if there's more things we haven't talked about.

Marcus (16:31.426)

Yeah. I mean both. a lot of, my opinion, a lot of these hormonal issues are lifestyle driven. So I always, I'm not a big fan of fasted workouts in the morning for females. I see a lot of my female clients doing that. So that's one thing that we talk about. Hey, let's have some kind of.

Jaclyn (16:49.208)

So let's dive into that because that's a controversial statement and I love those controversies, but tell me more about what you observe that leads you to say we shouldn't be doing that.

Marcus (16:52.705)

I know. Yeah, so with a fasted workout, right, you you're gonna get cortisol release with any kind of workout that that's going to happen, especially with those high intensity workouts. So the CrossFit workouts and things along those lines, the more high intensity, the more cortisol gets released. On top of that, for fasted, we're gonna get that blood sugar drop in the morning, which then cortisol then helps or help cortisol is going to spike, come back up, help balance out that blood sugar. So you're kind of getting a double whammy there. So I'm not a big fan of fasted workouts. I always try to tell females, hey, let's get a little bit of protein, a little bit something in your system before you jump into that. I know that's a big controversy. There's a lot of females who do like these fast. I think fasting serves a time and a place. I'm not opposed to it, but when we're trying to balance hormones, just, don't recommend it. The other big one is coffee on an empty stomach. I'm not a big fan of that one either. Same thing, because of cortisol that gets released, especially first thing in the morning. So I always try to delay coffee intake for females as well. And then I always try to start with a protein rich breakfast, which is in my opinion, huge.



Again, trying to balance out that blood sugar for the rest of the day, but really starting first thing in the morning. So those are the big lifestyle changes that we work on. We try to focus on prioritizing protein with every single meal. So I like to see around 30 grams of protein per meal. I don't like females skipping meals either. So making sure that having three meals a day, those kinds of big ones that we always talk about sleep too. That's always a huge thing. A lot of people nowadays just aren't sleeping well. They're sleeping less than seven hours, which impacts everything from detox systems to microbiome to cardiovascular health. mean, you name it. The other big one that we always work on too is toxin exposure. So we know our world's super, super toxic. We're exposed to so many different things nowadays that we've never been exposed to before and our bodies just can't handle them. So we always talk about beauty care products. We go through plastics, making sure females are removing those. We talk about cooking utensils. So making sure we're removing nonstick cookware that could be an endocrine disruptor.

So a lot of those like little small changes are the ones that often have the biggest impact. At least that's what I see clinically.

Jaclyn (19:00.782)

Well, I'm glad. mean, these are a lot of different opportunities for improvement. And I think it's really, let's talk a little bit about toxins more. Cause I think that one of the things that I've seen is it can feel really overwhelming because we literally are surrounded and bombarded by toxins. It's, have to be intentional to avoid them. So for example, with my patients, I try to have them implement the things that are like put in effort once, gain benefit for a long time.

So one example of that is like, throw away your nonstick pans, buy a safer option, stainless steel, cast iron, or there are the like ceramic coated ones if you must have nonstick that are better. But you make that investment one time and then it's like no change to your behavior later. Or utilizing a stainless steel mug for your coffee rather than a disposable or something, are even though if they're made of paper, they're lined with plastic. That's how they don't leak through the paper.

So what are the other suggestions? think if we can lay around those simple things and then focus on one area of life, are there areas that you find like, is it food? Is it food storage? Is it beauty care? Like you've touched upon a lot of these, but you even look, once you start to dive in, you're like, your menstrual products, your home products, the carpet, the this or that, it can just be a lot, right?

Marcus (20:22.423)

Yeah, and very overwhelming, like you said. And I guess probably the two, I hate to just pick one because I think there's such a huge overlap, but one would be food for sure. So, you

know, trying to eat as organic as possible. And I know this is an expensive one because it's something you're doing every single week by an organic produce, that those pesticides, herbicides, they mess with your hormones. They're going to disrupt the microbiome. There are toxins that are going to stress the liver. So there's so many different

Jaclyn (20:28.92)

There's so many, you can have two. Okay.

Marcus (20:50.051)

Negatives to these pesticides, herbicides. So that's definitely a big one. And even like, and I get the call thing, so the clean 15 dirty dozens, always a resource to use for when it comes to produce. The second one is beauty care products. Nobody in the United States regulates those things. Unlike Europe, that's really strict where they don't have certain products in their beauty care. Here, we don't really care in America because it's all about profit.

So that's another big one. So I like to utilize like the EWG, for instance, that's a good resource. give a lot of my female clients to say, Hey, let's actually look at and see what's in your beauty care products. What are they doing to your hormones? Are they increasing your risk of allergies? Is it a known carcinogen? Um, and then it's slowly making those transitions. And I always say, don't just go and throw everything away because your husband's going be very mad at me and he's going to come in here and, um, but starting slow. Yeah. Right, right. So when you run out of something, then let's find a cleaner alternative. Right? So when you run out of your.

Jaclyn (21:35.982)

Your patients will be happy though, like a big Sephora trip.

Marcus (21:45.539)

here's a cleaner option for you to use. it's making those slow changes. Granted, yes, you're gonna spend a little more on those beauty care products. But again, it's worth it in long run because your health is going to be better from that.

Jaclyn (21:57.592)

You know, I don't think there's a huge price point difference, you know, being a woman myself, like when it comes to that. And I think you're totally right, because it is, it's a buy once and then you use it every day, but that impact. So, and I would just add from a logistics standpoint, like it's become so much easier now, because it used to be that if you were like less informed or didn't want to go to EWG, which is a great resource, and it can also be kind of overwhelming to search for everything, you could go to a place like Whole Foods that employs standards for everything and then know that you're at least above some kind of set point that they've set. But now even like Ulta, Sephora, they're labeling

clean lines and it's so much easier to cleaner alternatives. And there's always like good, better and best. It may not be the best option, but thank goodness it's become a lot easier over time.

Marcus (22:48.897)

Yeah, absolutely. Absolutely. It is nice to have those options. I agree.

Jaclyn (22:51.246)

Are the same options coming up for men? I'm not seeing it quite as frequently as far as how many brands that can equal the use quality. For example, for women, it's hard to find a natural mascara that is as good as a toxic mascara. With men, I feel like there's just not as many comparable products that are as good.

Marcus (23:13.259)

Yeah, no, I agree. And granted too, like we use a lot less beauty care products and obviously, you know, the typical female would use. So, but yeah, I mean, you're even like your clones and your deodorants and things like that. It is harder for men to find those options. They're definitely out there. I think you're starting to see more of a shift, especially now. think more and more people want that, especially the younger generations. So I think in the future here, you're going to see a lot more office for guys too. Yeah.

Jaclyn (23:35.822)

Hmm.

Jaclyn (23:39.244)

I hope so. Yeah. Let's talk a little bit about food because you've mentioned buying organic, but are there other challenges with like the United States kind of standard American diet when it comes to the presence of processed foods, refined sugars, unhealthy fats, things like that when it comes to hormone health?

Marcus (23:55.733)

Yeah, absolutely. forget, it 66 % of the American diet is processed foods? I think it's somewhere in that ballpark. So it's a huge factor. You know, you're loading foods up with, you know, bad seed oils, inflammatory fats, a ton of sugar. It's the food manufacturers know what they're doing, right? They wanted to do these things that way you keep buying their products and you become relying on them. And it's really triggering that dopamine response in the body. But

Yeah, those foods, they're bad for our liver, they're bad for the microbiome, they're bad for our hormones. So that's where, that's something else we talk about a lot in the clinic here is

we go through, what is your diet? What are you eating? Where's your food coming from? Where is it being sourced? Because that also makes a big difference. It's always good to know your local farmer, know how your meat's being raised, where your eggs are being laid. So if you have that option, it's always something that we stress too. We live in Northeast Ohio here, so we actually have a lot of local farms, which is great.

Jaclyn (24:48.482)

Yeah, you're lucky.

Marcus (24:49.795)

Yeah. Yeah. And that is one of the benefits minus, you know, we don't have weather right now. It's not very good, but besides that, yeah, I mean, so I always try to stress that point too. There's a lot of CSAs in the area. So I encourage people, if you can sign up for a CSA, that way, you know, again, where your produce is coming from, you know, what's organic. A lot of times price wise, it's not much of a difference in what you buy in the stores to actually break it down. But yeah, there's a lot of negative impacts just on our overall health when it comes to these, these processed foods.

Insulin sensitivity is something that ramps up. We see cardiovascular disease ramp up with these processed foods. So I think we're going to see a big shift here hopefully soon with some of the recent legislation and changes that are coming. So hopefully more of that. rid of that red food dye was great, but I think we need more of those things. Really just overall for our health or our kids' health and the future generations to come here too.

Jaclyn (25:43.052)

Yeah, I mean, there's so much, so many things we use in our food that are not allowed in any other country in the world. And it's a really interesting just approach, difference in approach where, you know, companies are really free to use anything unless it's proven to be harmful versus using what we would call the precautionary principle, which is you kind of assume it could be dangerous. And so you use it judiciously until you know for sure that it's safe. And so it's particularly important. I mean, I do a lot with fertility because a lot of these affect fertility, they affect pregnancy, they affect neonatal development. And that's really where we start to be concerned. It's like our most vulnerable population. So I'm so glad that you brought that up and particularly around the local farmer because even if they're not, I get asked a lot about like, what if my local farmer is not organic and

That's an interesting one because if you talk with the farmer, most of them utilize integrated pest management systems and they want to reduce their pesticide use because they're in it for the long haul and they like care about their land, right? So when you're, especially when you're working with small farmers, but they may not want to go through the USDA

process. So, I mean, I don't know if you found the same thing in Ohio, I'm in the Northeast, but.

Marcus (26:57.281)

Yeah, so especially at the local farmer market, lot of the farmers will tell you, yes, it's organic, but we don't have that organic certification because we're not going to spend a couple thousand dollars to get that. We're a small farm. We can't afford to do that. But even eating local, eating seasonally, right? So eating what's picked out of the ground that day or the day prior, you're going to get so much more nutrient content from that versus something that was picked in California, shipped to Ohio, sat on a shelf for four or five days. So yeah, even if it's not necessarily, you know, 100 % organic, it's going to be the cleaner option for you.

Jaclyn (27:28.27)

Now you've mentioned a lot of kind of the health impact of these ultra processed foods and how these companies have a, I mean it's a lab, right, where they make these in a way that they're going to stimulate dopamine release or be the most palatable and make us want more. Like have you found in what you've read that there is truly like an addictive nature to these foods?

Marcus (27:48.035)

Oh, a hundred percent. Absolutely. Absolutely. And they've ran these food companies. Again, they're smart. They know exactly what they're doing. They run these tests where they'll take clients or whatever, whoever they're trying to get. And they'll actually wire their brains and they'll look at the reward centers in the brain and see, okay, what the eat these foods, what exactly happens. And when you look at the MRIs or the CT scans are running, I mean, the brain lights up like a pinball machine. It's insane. I mean, the reward centers just going nuts.

And again, these food manufacturers are putting those products in there so you continue to eat them, you like them, you buy more of their products. So it should be an illegal practice, in my opinion. But yeah, and some of these foods they're finding are more addictive than cocaine and heroin. But again, we allow these foods in our system here in America. You won't find these in Europe or Asia or these other parts of the world.

Jaclyn (28:37.186)

Yeah, it is wild because you think about food's purpose like as a healthcare provider, it's like to nourish, to grow healthy cells, to keep you well. It's not necessarily, it's for sustenance, not for like entertainment, right? And the way that they're designed now is almost like that

stimulation or that I would call it like almost entertainment value. If you're trying to stimulate that, you know, dopamine or stimulate the, what did you call it? The platter center of the brain. You know, it's really different. It seems like children would be particularly vulnerable to this as well.

Marcus (28:49.336)

Yep.

Marcus (29:07.489)

Yeah, absolutely. that's, that's the sad part, right? I mean, I have, have a almost eight month old at home. so not that we're feeding her, you know, any foods or processed foods yet, but you know, when you go to the store, you look at these things, you pick it up, you're like, what, why would you even give this to a kid? Like, parents aren't educated on these things. So you can't knock the parent. It's really the food manufacturer, but yeah, the kids are being targeted because they know these kids are vulnerable. Their brains are still developing. So if they can get these kids on these foods now, they're going to be consumers for the rest of their lives.

Jaclyn (29:36.558)

Definitely. Now you talked about with your own child, but like what do you counsel with patients? Like how do they make these changes with their own children? Especially if they're like, you know, 12 year olds don't make good decisions, especially if they've on food, nutrition, if they've been exposed to processed food for so long.

Marcus (29:53.409)

Yeah. So a lot of times, I mean, especially with kids, because we do see kids in our office. It's really talking to the parent. We have to the parent on board and it's really coaching them. So we always start slow. you know, let's say you like Cheerios. Okay, let's find a better option here that we can start breakfast with. Or if you do like chips, there's cleaner brands out there instead of something that's fried in some kind of bad oil, then we can use something that's maybe used with coconut oil or avocado oil. So there's cleaner options out there. So it's really just finding those alternatives. I think parents really like that. And I tell them to you don't have to get rid of everything. You can still enjoy these foods. We're not going to take everything away from you. But let's work on some healthier options here. Let's make sure we're prioritizing protein over these bad processed foods. Let's make sure that we're getting plenty of fresh fruits and vegetables in the diet. If kids are a little picky, then there's ways to sneak things in. We can do smoothies. We can add in certain fruits and vegetables in there that are going to be masked by the flavors. So really just, again, same thing as with adult small changes, seeing where the parent and the child are at, what they're willing to do. we have a great nutritionist in our office who helps with those things

too. So I often refer to her for additional help. I can only do so much and sometimes a second voice and that nutritionist title people listen more for some reason versus me. But, so we try to use a team approach here in the office too, which is great.

Jaclyn (31:14.382)

That's good. It's always that way that, you know, when you hear it from a parent or a spouse, you never want to do it, but you hear it from a third party, you're like, that's a great idea. That's what we've heard it before. That's great. Any last recommendations that you'd make from a perspective of like hormone balancing when it comes to lifestyle? We've talked about – we've talked a little bit about exercise and movement, but I'd love to know if that plays a bigger role in hormone balance for women from your point of view. We've talked about toxins. We've talked about nutrition.

Marcus (31:43.351)

Yeah, absolutely. I mean, exercise is good for everybody, right? We know that there's really no, I mean, obviously there's gonna be some downsides if you're exercising, you know, excessively or things like that, but, exercise is great. Moving the body is huge, from a detox standpoint. So we talk about like estrogen dominance, building those things up. That's going to help you detoxify, things out of the system. Exercise helps with blood sugar, say, know, stability. So if we have like a PCOS case where there's an insulin problem, making sure that we're moving the body to help balance out blood sugar is going to be huge. I am a fan of actually using weights as opposed to just strictly cardio. I find a lot of females just focus on cardio, which is fine. I think you need a good mix, but actually lifting weights to actually help build muscle will help out with insulin sensitivity more. It will help out balance hormones more. So I always encourage females, okay, let's try to get a little bit of both. Let's try to still get your cardio in, because I know you love that, but let's maybe add a little bit of weights two, three times a week just to make sure we're getting a good balance there really just help things out. So yeah, I always encourage people if you can get at least four to five days a week, that'd be great. And even, you know, the days you're not working out doing something, whether it's yoga or stretching or going for a walk, just something incorporates some daily movement. Cause as Americans, we sit way too much nowadays. We're not getting that movement that we need, which is driver for lifestyle issues.

Jaclyn (33:01.806)

Definitely. You know, I read this recent study and I will try to find it for the show notes if I can, but it was that they did a study showing that if you're always sitting down, 20 squats every 45 minutes actually had the same kind of exercise impact as like maybe it was a 20 minute walk or a 30 minute walk or something. even if it feels like you can't get that bulk of time, which all of us can find 20 minutes. Like if anyone here is listening,

I'm sure you've spent 20 minutes like on Instagram today or on TikTok today. So do that on a walk, right? Or sometimes I'll actually work on my Peloton. Like if I'm just working and I'll just like pedal my legs, obviously nothing too aggressive. you know, just moving anything you can. My husband takes his meetings, takes one-on-ones with his headphones on on a walk to try to get moving. And he has a couple of people that have their own movement goals. So it's easy to find those ways. But if you can't, even little bursts of movement can make a big difference. Yeah, super cool. Last thing I wanna talk about is, and I can't believe we haven't yet, is the Dutch test. Because I know you'd mentioned that you run the Dutch test on patients with hormonal balance. I'd love to know just your favorite reasons to use a Dutch test, or maybe their favorite things to look at on the test.

Marcus (34:02.947)

Yeah. man, that's a great question because there's so many different things that we like to look at. We do see a lot of fertility cases. So that's where I really love the Dutch test for something like that. We see a lot of hormonal acne. We see a lot of irregular painful menstrual cycles, PMS, bloating and breast tenderness. I mean, you name it, we see it. So I wish I knew the ratio of the breakdown, like what we see in terms of like fertility versus everything else. But yeah, I mean, really most females nowadays, I feel like have some kind of hormonal balance because of the chronic stress, the toxins we have in our world, lack of movement, not sleeping enough, poor diet. So we're seeing more more younger females come into, know, in their early twenties, sometimes even in their teens, which really, you know, in my opinion, should be having these problems that early in life. But we're seeing more and more of that. So I love the test. I think it's a great test.

Besides the GI map, it's the number one thing that we run in here. I mean, it's probably 50-50 between the two. So yeah, it's a great test.

Jaclyn (35:25.486)

Well, I really appreciate you spending some time with me today, really sharing a lot about gut microbiome and we got off on some really valuable tangents too and things like food quality and movement. So thank you for sharing your expertise with me today.

Marcus (35:38.839)

Thanks for having me, I appreciate it.