

Novel Approaches to Help You Assess and Take Control of Your Metabolic Health: An Interview With Dr. Nasha Winters

By Dr. Joseph Mercola

Dr. Joseph Mercola:

All right. Welcome everyone. Dr. Mercola helping you take control of your health. And today I'm joined by Dr. Nasha Winters, one of the leading oncologists in the U.S., if not the world. And as part of her strategy, we're both in total alignment and agreement that the primary way to treat cancer is to prevent it. No question about it. And the best way to prevent it is to be metabolically healthy.

And guess what? When you're metabolically healthy, not only do you prevent and treat cancer, but you prevent and treat virtually every single disease known to man. So, there's enormous benefits to this. So, she was meeting with her team not too long ago and realized — well, I'll let her tell the story, but essentially there's just Metabolic Health Day that we're here to discuss and promote, and establish perhaps a new ritual on the calendar. So, with all that backstory, welcome and thank you for joining us and we'll dive in.

Dr. Nasha Winters:

Thank you. Thank you, Doc. I really appreciate it. I appreciate your graciousness in doing this and getting the word out. You have such a meaningful reach out in the world and people listen to you and follow your lead. And you have been one of the thought leaders and promoters of metabolic health for, my God, going on 30 years? Is that what you were discussing? So, this is really, really powerful that we're having this conversation. And you alluded to it.

Over the summer, I spoke at nine — I was [at] nine different lectures at five different conferences over six weeks globally, and only one of those was actually a ketogenic metabolic conference, but the rest were general health conferences. And the theme is, as you mentioned, metabolic, that all the diseases affecting us today, cardiovascular disease, dementias and Alzheimer's, even into the autism realm, obesity, diabetes, cancer. All of these things have a common denominator, which is the metabolic brokenness that we're all facing today. And I think you and I had a really great conversation at the pool a couple of weeks ago at a conference in Orlando, and what we were quoting the 12% Americans being metabolically —

Dr. Joseph Mercola:

Yeah.

Dr. Nasha Winters:

[inaudible 00:02:13] 2018 and then in 2020 [inaudible 00:02:18].

Dr. Joseph Mercola:

Well, specifically that study was in the Journal of American College of Cardiology in July of last year. And it referenced the NHANES [National Health and Nutrition Examination Survey] data, which is probably the best collection to do that. And it was last year, but obviously, it takes time to correlate and collect the data and analyze it. So that data was from 2018. It showed 93%, 93% were metabolically unhealthy and that's five years old. So, it's got to be over 95%. Nineteen out of 20 people are metabolically unhealthy, unfit and inflexible.

Dr. Nasha Winters:

Unbelievable. And this is why we decided, when I came back from those conferences, we started looking as a team of like, "How can we" — I mean, we're in trouble, right? This is going to bankrupt our entire medical systems globally, and it's-

Dr. Joseph Mercola:

Well, forget about the finances. This is going to cause everyone to die prematurely.

Dr. Nasha Winters:

Exactly. And we're seeing that already. Right. And so, we came back and we're like, "Okay, great. Let's find out what the day is to celebrate this and let's do something about it, do an awareness campaign." Well, the day didn't exist. We have Love Your Donut Day and Big Gulp Day and Pizza Day. We have all of those days out there, but there's nothing around truly creating wellness or prevention of these chronic illnesses that are bothering us today. So, I was so excited and we're like, "Well, we're going to be the ones to kick it off." And in doing so, we have been joined by dozens and dozens of organizations from researchers, hospitals, clinicians, to family foundations, to really powerful thought leaders like yourself, people in the testing environments from blood tissue assay world to genomic testing to ketone and glucose-testing companies, you name it, we're all joining forces. At this point, we have probably over 5 million reach at this time. It was 4.5 last week, but we've added a few more big sponsors to this event.

So, we hope to get this message out to millions of people in the weeks leading up to the inaugural Metabolic Health Day, launching 10/10, October 10th, 2023. We don't expect this to be the last. We hope it's the first of a grand movement, and we're very proud to be partnered with so many people like yourself in getting this information out there because we're in trouble if we don't.

Dr. Joseph Mercola:

Yeah. So, I'm wondering if you've applied for the formal process of actually adopting it as an official day, you know, like the Donut [Day].

Dr. Nasha Winters:

Yes.

Dr. Joseph Mercola:

So, you have done that? Is that a difficult challenge to do? Or is it just fill out the paperwork?

Dr. Nasha Winters:

It's filling out the paperwork and now we wait. So, we are in the process of that. And of course, you know, your dog could have a day and make that happen, but we're in the process, we hope within the next few weeks or the few months, this does become an official adopted day, internationally, that we can come back to again and again. But we didn't want to wait for it to become, you know — We thought we'd get the ball rolling.

What's interesting is 10/10 also happens to be Mental Health Day. And we didn't realize that, but it's actually a beautiful merge of these two because we're finding more and more. You've probably interviewed people like Chris Palmer on your site or some of the others that are looking at metabolic psychiatry and the underpinnings of even our mental health as it relates to metabolic health.

Dr. Joseph Mercola:

Well, there's no question. Clearly one of the greatest contributors to disease and metabolic dysfunction is stress hormone increases. And that could be from metabolic issues, typically, but it's certainly and absolutely, and maybe even dwarf the metabolic issues, is emotional or psychological issues.

Dr. Nasha Winters:

Yeah, it's huge. Huge. And our standard, they define metabolic health as having a good hip-to-waist, waist-to-hip ratio, having good lipids, whatever that means in their terms, good glucose levels. They talk about having good stamina. And even the ranges that our standard of care is giving is just too lax. So, you and I talked about body fat content. We've talked about metabolic health with regards to insulin regulation. They're still saying that it's normal to have a blood

glucose of 100. You know, that's really not — that's kind of the highway to the next step of things. They're focused more on the overall cholesterol and overall LDL, but really, the issues we want to look at are more the triglycerides and the HDL. So even in our world, the functional medicine and the metabolic health world, we look at a little different ranges of what we want to focus on for true prevention and treatment of conditions. One of the coolest things you and I talked about is you're on a huge mission right now to educate and empower about the linoleic acid/omega-6 conundrum that we're in here, which you're 100% right. We need to be addressing those at the same time. If we were all as lucky to be you, less than 5% of the population, we could just primarily focus on lowering of the linoleic acid. But our —

Dr. Joseph Mercola:

No, no, it's not less than 5%. It's less than, and this would be generous, 0.5%.

Dr. Nasha Winters:

Yeah?

Dr. Joseph Mercola:

It's probably 0.05% who have optimally healthy linoleic acid levels. It is well under 1 in 1,000, maybe 1 in 10,000.

Dr. Nasha Winters:

And that's the place here. It's like we have to do more work now to achieve metabolic health. And so, where I'd like for you, for your listeners to hear this and how we can best support and inspire them, I know what my favorite to-dos are to help enhance metabolic health, but I'd love to hear from you what your top three would be.

Dr. Joseph Mercola:

Well, sure, happy to do that. But before we go there, one of the questions in my presentation at the Orlando event, and by the way, we were at the pool, not because we were sipping margaritas, but it was the healthiest place to be in an event at a conference. Typically, if you go to a conference, you are indoors all the time, and they're serving you terrible food, and you're not getting any sun exposure.

So, we said, “The heck with this.” We went out to the poolside where it's socially acceptable to take your shirt off, which I did indeed do in a heartbeat, and got sun exposure and we had a wonderful dialogue.

So, during my presentation there though, one of the questions after I gave the presentation was a really good one. And it wasn't one I had reflected on recently and it's like, and I think we concluded in real time because you were there sitting in the front row of my presentation and kind of agreed with what I thought. The question was, “what is the best way — simple blood tests to identify metabolic inflexibility?” Excellent question. And there's a lot that you can use to support that diagnosis. And you alluded to some of the variables, but it would seem that insulin resistance is the core of this. And the primary way to measure that is simply a fasting insulin. And typically, the standards would be below 3. I used to test mine all the time when I was doing Quest as a laboratory and they didn't go lower than 2. You can have an insulin level of 0.1 and it would still say less than 2. So, you know, basically that was the arbiter, but I switched to using Labcorp now in addition to Quest and they will actually give you levels below 2. So, the first Labcorp test I had done was 1.9.

Dr. Nasha Winters:

I love it.

Dr. Joseph Mercola:

So, ideally I think we concluded that an insulin level under 3 is a good goal. Fasting insulin, fasting insulin. So, I think that's a good place to start, and I think it should be a dialogue. And, you know, I am about at least 15, if not 20 years removed from being in the trenches and treating patients. So, I've got some ideas on insulin resistance, how to resolve it. But what do you do to address someone who was eating a pretty healthy diet, has got a pretty good regimen going on with respect to their movement and that physical activity, and yet their insulin level is 7 or 8?

Dr. Nasha Winters:

Yeah, yeah. Well that —

Dr. Joseph Mercola:

Or higher.

Dr. Nasha Winters:

Yeah. And what you show me when you see that, when someone's eating well, when they're, maybe they've been carb-restricted for years, maybe they're really mindful about lowering linoleic acid and any of those seed oils from their diet, if it's still revving above 3 and someone who would, theoretically, be metabolically healthy, and they don't have any other parameters that standard of care says are problems with metabolic health. So, their hip-to-waist ratio is excellent. Their blood pressure is excellent. Their glucose is excellent. But when I still see high insulin, I'm asking questions of what's going on with stress.

Joseph Mercola:

Hmm.

Dr. Nasha Winters:

You completely understand that. Because when cortisol goes up, insulin goes up.

Dr. Joseph Mercola:

Okay, so what are your metrics for defining metabolic stress with cortisol levels? Because it's such a variable. I mean, the cortisol pulses, it's not like your blood cholesterol at all. I mean, it definitely is influenced by time of day and it's a diurnal cycle. So, what do you measure throughout the day? Do you do urinary testing, 24 hours or what are your metrics?

Dr. Nasha Winters:

So, that's a really great question. For me, I look at a CBC (complete blood count), complete blood count, because —

Dr. Joseph Mercola:

How does that impact insulin levels?

Dr. Nasha Winters:

I'll tell you. You can see a lot, when you have people with chronically depleted white blood cells.

Dr. Joseph Mercola:

Really?

Dr. Nasha Winters:

Chronically depleted white blood cells is often a sign. So are chronically elevated, for no other reason, ASTs (aspartate transferase) and ALTs (alanine transaminase).

Joseph Mercola:

Hmm.

Dr. Nasha Winters:

Because that's also starting to show us early fatty liver, which has a cortisol-insulin relationship as well. So that's my cheap person's kind of surrogate test. The next test is an AM cortisol.

Dr. Joseph Mercola:

Mm-hmm. Is it with intermittent fasting first? Does it matter how long it is after you wake up?

Dr. Nasha Winters:

Great question. If folks are 12 — I want them 12 to 16 hours of fasting. If they're more than 16 hours, cortisol is going to naturally go up.

Dr. Joseph Mercola:

Mm-hmm.

Dr. Nasha Winters:

So, you don't want to push it into that natural physiologic state that's supposed to happen when you're in a fasted state. So, you want to get it before that. But you need more than 12 hours, 12 hours or more, to clear the daily, the previous day's events from your body.

So, 12 to 16. If someone's been [in] a long-term moderate carb intake and fast comfortably for no less than 13 hours, I think 13 to 16 is fine for those who are really new. Twelve might be all you can handle and that's OK. So that morning cortisol and that fasted state is going to tell us a lot. So, if it's below 15, 15 to 17 is my happy place range.

Dr. Joseph Mercola:

Really? So, there's a problem if it's lower?

Dr. Nasha Winters:

There is a problem if it's lower. Because that is — you can't discern exactly what's going on without a 24-hour diurnal testing throughout the day. So, you can understand the pattern of the rhythm. Because it could be that it's a false, like maybe your insulin had spiked in the morning and brought up your cortisol, or your cortisol spiked in the morning and brought up your insulin. It's going to be hard to tell without that more spot-check timing. But you can get that further. So, if somebody has low, that could also allude they've been in a long-term stress response that no longer is even blipping their cortisol on the screen. I often —

Dr. Joseph Mercola:

And by low, you mean under 15 fasting.

Dr. Nasha Winters:

Exactly. Exactly.

Joseph Mercola:

Okay.

Dr. Nasha Winters:

And I'll see that in folks who've really been through the ringers with a lot of metabolic, or a lot of conventional oncology therapies, for instance, it really kind of wipes them out over time. In the beginning, that cortisol will be elevated. And so, the elevation is anything above 17. So, if people are revving above the 17 mark, they're kind of in a run from the sabretooth tiger push on a pretty regular basis.

Again, we can tell on a times four ASI, adrenal stress index test, where you're checking at these spot points first thing in the morning, mid-morning, mid-afternoon, right before bed, you can see the pattern of the circadian rhythm. And a lot of people in our world today have what we call a switched circadian rhythm. So, their cortisol and their insulin are actually really high at night, which makes it difficult to fall asleep and stay asleep, or they have where that's one switch.

The other thing that can happen is folks who have a normal diurnal rhythm, but it starts to spike early, that's also a cortisol. So, maybe that 3 a.m. wake-up call when you're waking with your busy brain, that's going to shoot up your cortisol and your insulin levels as well and create this

dawn effect with elevations in your blood glucose and in your insulin levels. So, we can get a little bit detective-like with this and really understand the pattern of the individual so we know where to best support them.

Dr. Joseph Mercola:

Yeah, and you would expect a person who's been doing chronically low-carb, and by that I mean technically anything under 150 grams a day, but some people take it below 50 grams, some people even below 20 grams a day, which is ridiculously unhealthy.

Dr. Nasha Winters:

You got to speak to normal and cancer metabolism though. They're very different.

Dr. Joseph Mercola:

Yeah. Well, because you, well maybe we can tangent there in a moment, but for healthy people, they really need the carbohydrates to minimize the cortisol response. So, if you're on the low carb approach, that you are going to have an elevated cortisol for sure. The dawn phenomena become really very persistent and may actually start about shortly after midnight, 2, 3 o'clock.

Dr. Nasha Winters:

Yeah. And you can see it on those ASI tests, and that's our feedback loop. And so, you're absolutely right for that. And I would say, you know, for someone, and this is what's hard is when we qualify healthy, you and I've already talked about this, less than 5% of us would fall in that category. So, it's tricky, right?

Dr. Joseph Mercola:

Yes

Dr. Nasha Winters:

Yeah. But once you do, like if you really have worked hard, if you have been, maybe you're dealt with a cancer diagnosis and you have a different metabolic process than you do in a non-cancer environment, you may need a carb-restrict in that window. But people like myself and the folks that I train, we know to watch for when we need to alter the diet to the individual's needs, to

their recovery, for protein sparing, for loss of muscle mass, things that we have to really watch for. We are testing our patients monthly. So, we're not—

Dr. Joseph Mercola:

This is a good segue because clearly, and this is what my current thought is on this, and it probably is going to change next week. Who knows? Because it's an evolving—

Dr. Nasha Winters:

It is.

Dr. Joseph Mercola:

-progression as you gather more data. But my current thought is that, as you mentioned, 95% or more of the population is metabolically inflexible. And it seems this, I mean, that's the vast majority of the population. But this is the people who would likely benefit, at least initially, from a low-carb approach. So, I suspect you agree with that. And if you agree, what metrics are you monitoring to know when it's time to get off of this? Would it just be monitoring the fasting, insulin level? Are there other items that you care to review?

Dr. Nasha Winters:

Sure. So, really important when we do our onboarding for a new patient who's coming to us with a diagnosis of cancer, this is a different metabolic process and you can listen to Dr. Mercola and I's discussion on this in previous lectures or previous meetings.

But ultimately, we get a baseline insulin, C-peptide, hemoglobin A1C, insulin growth factor, the CMP (comprehensive metabolic panel), which is the metabolic profile, which has glucose. We also look at an LDH and LD isoenzymes, the lactate dehydrogenase, which can be a really big clue of what's happening in the mitochondria and what's happening in just our metabolic health in general.

We look at triglycerides, so if those are elevated, we know there's some fatty liver issues. The AST, ALT, GGT (gamma-glutamyl transferase), these are liver enzymes that also can present in that way. Most of our patients by that time also get on a blood glucose as well as blood ketone testing to make sure they're nailing their macros at that time to make sure it's working for them. So, we get them started with kind of a foundational look. Then we look monthly at a CBC, CMP, and trifecta, CRP (c-reactive protein), Sed rate and LDH so we can see if we're moving the overall metabolic terrain into the right direction.

Dr. Joseph Mercola:

And why are you doing Sed rate instead of hs-CRP (high-sensitivity C-reactive protein), which seems to be more sensitive?

Dr. Nasha Winters:

We do hs-CRP as well. So that's the part of the trifecta. So that's one —

Dr. Joseph Mercola:

Okay.

Dr. Nasha Winters:

The hs-CRP or quantitative CRP, some countries we work with can't get the HS. So quantitative, because to your point, like if it says below 2, well, 1.9 —

Dr. Joseph Mercola:

CRP.

Dr. Nasha Winters:

Right? So, in our world, a CRP above 1 is dangerous in the oncology world.

Dr. Joseph Mercola:

Yeah.

Dr. Nasha Winters:

A Sed rate above 10 is concerning for thick, sticky blood patterns, autoimmune patterns, chronic inflammation. LDH can have a variety of reasons why it's elevated. It's most often the cancer world related to a cancer, cancer in process, but it can also show us the tissue of origin that's in distress, whether it's the bone marrow, the kidney, the heart, the liver, the lungs, we can really get that down. So that monthly testing shows me, “Are we moving the ball forward together?” If it's still wonky and it's not responding for whatever the reason is, because it's always going to be

an n-of-1, we'll dig a little bit deeper, but ultimately we don't repeat those other tests like the insulin and whatnot for three months.

So, we do a quarterly check-in on these patients. Once a patient goes into remission or goes into a strong stability of their “cancering” process, we're looking every month until their trifecta is perfecta, then we move them to every three months for the first two years. Then we move them to once or twice a year depending on their history. So we're watching this closely.

And there definitely comes a time and a place when you can expand their horizons on the dietary front. So as an example, for somebody like me, I've been restricting carbs for so long that I can now eat a pint of berries. It doesn't do anything to my CGM, doesn't do anything to my blood glucose, to my ketones. My body knows exactly what to do with that sugar. But it wasn't like that in the beginning. I would look at a raspberry and it would cause me problems. Right? And so, we all —

Dr. Joseph Mercola:

And for those who don't know, you are a cancer survivor, which is what catalyzed your interest into this field.

Dr. Nasha Winters:

Exactly. Thank you for that. And that's just it. The same month that we're launching Metabolic Health Day on 10/10, on 10/21/1991, I was given several months to live with an end-stage ovarian cancer diagnosis. So, it is near and dear to my heart. And I do very much recognize the differences in the metabolism of somebody who's dealing with cancer and the metabolism of somebody who's not. And so, when you get yourself flexible in the healthy state, you have and should be able to tolerate carbohydrates when you're a nice flexible engine here.

That's what's so sad is we have a long way to go, culturally, worldwide to make that the case. And that's where we really are so grateful for your helping with that message because you are a champion of this. You are a champion of people also being even more clear about what may be in tandem, if not worse. The driver of insulin resistance and metabolic instability is the inflammatory induction process that's happening with linoleic acid and the seed oils, which is also a new invention in our modern times that is killing us rapidly. Rapidly.

Dr. Joseph Mercola:

Okay, well, I want to address that, but I want to put that on a table for a moment. And we go back to these metrics, which precipitates a fundamental question. Do you think that there is an aberration in the physiology of someone who's acquired cancer, developed cancer, such that they would benefit from relatively long-term carbohydrate restriction, as you appear to be under, which I was surprised to hear because I didn't realize that until just now.

Because in my view, you know, once you've addressed that you should be able to get to higher levels and depending on your activity level, I think the minimum amount of carbs you want to get is 150. But if you're really active, you can go to at least 400 or 500, depending on your size, which is what I do typically every day, it's pretty uncommon where I'm not over 450 grams. Now, I've never had cancer. Do you feel that there's a phenotype that develops because of the cancer and that you need to be overly cautious to prevent a reversion to that phenotype so that you don't get a metastasis?

Dr. Nasha Winters:

Absolutely. I love this question because this is the biochemical individuality, the epigenetic individuality. So, for instance, some of the phenotypes such as the ADIPOQ gene, the ACSL1 gene, those are — basically, you were wired to be diabetic. I mean, that's the case. This is naturally an environment that just has a tendency to fall into insulin resistance categories. There's dozens of others, but those are the two big ones that come to mind. In the oncology, like the blood biopsy or the tissue assay world, if we see PIK, so the PIK3CA, the kinase issues, that is 100% glycolytic metabolically pushed and it's in 70% of cancer types. And it's far more — it also makes for a much more aggressive and progressing cancer and a much higher recurrence rate.

So, we're very, very careful with folks with that particular genetics to what — you can also retest because over time when you're treating that body, it may no longer express that in its tissue. So, we also check in on that periodically, right? So just because you tested P10 loss or BRCA (BRest CAncer gene) here or there or different things, a lot of people think that's static and forever. It will change. You can change that with whatever therapies you're introducing into the system.

So, if that changes, then you can obviously change the way you're going to feed it or not feed it. But if you have that, you have to probably be a little bit more on watch and how you're dealing with that. And then to your point of, you know, my mantra is you've had me speak a lot on your show is “test, assess, address, don't guess.” And so, this is the beauty of things like HRV devices, heart rate variability, because that can show your sleep patterns and suggest what's going on with your diurnal cortisol, which will also show how that's impacting your blood sugars.

But you can also be doing continuous glucose monitors. See how you do each time you eat something when you start to explore and be a living laboratory. My husband has a lot of those SNPs (single nucleotide polymorphisms) we just talked about around the diabetes. Everyone in his family dies of diabetes, complications of diabetes, and cancer. It's just like a package deal. He loves, like he needs more protein. He is incredibly active. He's incredibly fit. But if he gets too much red meat, his insulin goes sky high.

So, he has the genes for that. So we have to even be careful of how somebody that you're perceiving, like in the carnivore world, I want to check their blood sugars as well, because we get to this belief system that, “Oh, I'm not taking any carbs in,” but the gluconeogenesis that can

come from even too much protein in certain phenotypes needs to be thought after, it needs to be monitored.

So, this is the beauty where I would love to be a vegetarian, that's what my palate wants, but my body says "no way." And TMI for your listeners, but as I'm moving into perimenopause, my body needs different things, and I know I need more protein now. I feel it, and I always feel better, and my body composition regulates when I have more protein and carb-restrict, but my body then uses the gluconeogenesis of the protein to fuel me versus that of the simple carbs to fuel me.

And so, it's a really interesting thing that I'm just listening to my own body. letting my own labs drive the show and tell me where I'm going on the right path or not. And the same with our patients. And so, we adjust accordingly, which is really, it's fun. I don't know, maybe I'm just, I like that side of my world. I like being the detective. I like to get curious with people and see what's making things happen. I'm dying to look at your labs. I wish I could knock down watermelon in the way that you do, but you know, maybe goals, you're giving me goals here in the next few years. But I think it's just really an n-of-1 on this process.

Dr. Joseph Mercola:

Yeah, it's pretty uncommon where I'm not having at least 3 pounds of watermelon in the morning. That's without the rind. Sometimes it's 4, even 5. But getting back to the LA (linoleic acid) issue and you had mentioned that there's some inflammatory processes going on there. So, most of my listeners know that I've written a paper earlier this summer, a narrative review on LA. And in the process of writing that paper, it was a peer-reviewed paper. So, we had four peer reviewers and one of them was giving me such a hard time, but he brought up a really good point and provided some good data for it. That the concern about inflammation from linoleic acid is that it's, that's 18-carbon and it is transferred to a 20-carbon, which is called arachidonic acid, which is the classic, pro-inflammatory omega-6 fat. And that is the speculation as to why increasing linoleic acid was causing a problem because it's increases inflammation from the arachidonic acid. Well, it turns out that's not the case.

Dr. Nasha Winters:

Interesting.

Dr. Joseph Mercola:

Yeah. It isn't the case at all. And he provided some really good data to support that. So I said, "Okay, well that's off." We said, then, "Well, what's causing it?" It doesn't appear to be inflammation. There may be a small component, but that's not it. There's one component that I addressed in the paper and another that I neglected and just re-learned recently. But the one I put

in the rest of the paper is that linoleic acid has two double bonds, and these double bonds are highly perishable, susceptible oxidative damage, could be light pressure, oxygen, combination of any of the above, heat. And when those double bonds are damaged, they produce an oxidative metabolite. These are typically reactive aldehydes like 4-hydroxy-nonanol, methylglyoxal, methyl aldehyde, acrolein. There are literally hundreds and hundreds of these things. And it's these toxic reactive aldehydes that damage the tissues. We believe that's one mechanism. But there's an even more fundamental physiological and metabolic component, in that PUFAs (polyunsaturated fatty acids), LA specifically, is anti-metabolic.

What the heck does that mean? Well, it goes in there and it literally decimates mitochondrial function, accelerates death and dying. It does this through increasing reductive stress, which we're not going to go into now. But one of the other mechanisms is that PUFAs and estrogen interestingly, which is pretty similar, biochemically, because it also has double bonds, it actually causes calcium to go inside the cell. It increases intracellular calcium concentrations because the concentration outside the cell of calcium is 50,000 times higher than inside the cell. So, calcium intracellular is an important signaling molecule. And one of the functions that it does when it is activated like that, is it increases the levels of superoxide and nitric oxide, which is not a good combination at all.

Dr. Nasha Winters:

Yeah.

Dr. Joseph Mercola:

Because you probably — yeah. It basically forms almost instantaneously, and I do mean instantaneously into peroxynitrite, which is a free — not a free oxygen, free reactive oxygen species, reactive nitrogen species, but it's really bad. It's one of the worst in your body, probably collectively worse than hydroxyl free radical. Not as damaging per unit molecule, but it lives a thousand times longer. So, it's able to travel throughout the whole system. So, this peroxynitrate level increases, which also furthers this oxidative damage. So, that's another mechanism it has.

Dr. Nasha Winters:

Fascinating.

Dr. Joseph Mercola:

So, that's why I'm so diligent and obsessive about warning people about this because it's a simple thing. And from my view, you know, historically with correlations to epidemiology, there's no other variable that appears to be the culprit other than this. It's certainly not sugar intake. It's not carb ingestion at all, in any way, shape or form. I mean, there's, there's correlations to it, but the

correlations would be processed food and you know, what's in higher concentration of processed foods than sugar?

Dr. Nasha Winters:

Linoleic acid.

Dr. Joseph Mercola:

Or seed oils, yeah. So, it comes together and it's unfairly vilified typically. When you're metabolic unhealthy, it's definitely an issue and you have to control it until you are healthy. But once you're healthy, healthy—

Dr. Nasha Winters:

Another fish to fry once you get that metabolic flexibility, you need to go after linoleic acid.

Dr. Joseph Mercola:

Oh yeah.

Dr. Nasha Winters:

And you told me, you taught me this, that it takes years to clear that out.

Dr. Joseph Mercola:

Yeah. The half-life of linoleic acid in your body is 650 days. But you know, you're going to feel better within a few weeks, few months. But if you were really obsessive and diligent, and sought to minimize or limit your intake of linoleic acid to below 5 grams a day at a minimum, I've gotten mine to below 2 grams a day. Under three years it would take to get pretty healthy levels like way under 5%, maybe even 3%. Ideally, you want to be somewhere between 1% and 2%, which was the historical norms, the norm of anyone who lived before 1870. Pretty much anyone, any human on the planet had that level.

Dr. Nasha Winters:

Good old post-industrial food revolution, right? I mean, my gosh, [\[crosstalk 00:32:53\]](#) everything.

Dr. Joseph Mercola:

Yeah. Absolutely.

Dr. Nasha Winters:

And then what we feed our animals. So, I'm curious if you've seen linoleic acid levels much higher in the corn-fed — I mean, I would assume — in the corn-fed, grain-fed animals versus those who are living on the [inaudible 00:33:07].

Dr. Joseph Mercola:

Well, not necessarily, it depends on the animal. So, the animals can be divided into two broad categories. One is a ruminant, the other is a non-ruminant. The ruminant has multiple chambers in their stomach. These chambers harbor bacteria, which are responsible and have the capacity, capability to convert a polyunsaturated fat to a saturated or monounsaturated fat.

So, that's why a cow or sheep, a lamb, bison, when they eat, they're fed grains. They can be given grains their entire life, entire life, which is not healthy for them in any way, shape or form. I'm not encouraging that, but it is done. But the end result is instead of a 2% linoleic acid, they'll have a 3%. I mean, it goes up marginally high. I mean, it's less than double. It's probably 25% to 50% higher. So yes, you do not want grain-fed beef because typically the grain is contaminated with glyphosate and other issues. So, you want grass-fed, ideally [it] would be the best. But if you're between a rock and a hard place, you could have it.

And if people go out to restaurants and from a linoleic acid perspective, like a steakhouse would be one of the better places because you can get a decent steak. And assuming they don't put any seed oils on the steak — some of them would, you have to be really careful. And the server, food server, has to be your friend and you're a partner in making sure that no one throws any damaging seed oils on your food, because they're well-intentioned, but to them, there's no issue. You know, they're not aware of this. This is like smoking was in the early 1900s. Some people thought it was a problem, but virtually no one did.

Dr. Nasha Winters:

Interesting. I love it. So, it's basically, you're telling me the ruminants have this sort of amazing alchemy in their guts that —

Dr. Joseph Mercola:

Mm-hmm.

Dr. Nasha Winters:

-can transform it, that it's not so passed on to us. But like you said, ideally gold standard, we'd want to eat better choices on that. But this is just fascinating. And I think this is what is so wild is when a lot of people move into a carb-restricted world. They do not pay attention, at least historically, when I've spoken at various low-carb communities, ketogenic communities. I call it "dirty keto" or "dirty low carb" because they often jump right into heavily processed seed oil bars and things to lower their carb intake, which is the fuel on an open fire in that piece.

So, I think that's important to discuss just like folks who are lowering their linoleic acid. If you are also not dealing with your insulin resistance patterns, you're in trouble. And the cool thing, my experience, because we do this with all of our patients, is we push them both to go. to lower their linoleic acid intake and lower their insulin levels from the get-go, I think going at that parallel path gives you the biggest bang for your buck. And then you're able to become more metabolically flexible quicker. And I think you're giving us an understanding when I may have a patient who's really was gung-ho on getting on the low-carb, but didn't start to make the adjustments in their fat. They're not going to be as successful as those patients who were more mindful of the fat, the type of fats they take in.

So, this is really helpful for folks to understand that I think Dr. Mercola is really one of the only people really shouting at the rooftops right now about this issue of the PUFAs, the linoleic acid, and its damaging effect on our metabolic health and specifically on our mitochondria, which is at the root of all of the diseased issues we're dealing with on the planet today.

Dr. Joseph Mercola:

Yeah, most natural medical physicians understand that seed oils need to be avoided. It would be the rare and foolishly inept physician who doesn't understand that. But conventional medicine feels the exact opposite. They've been brainwashed since the '50s with the Ancel Keys paradigm that these seed oils are really highly beneficial, useful. They protect you. They improve your cardiovascular health. Why? Because they lower cholesterol. Do they lower cholesterol? They absolutely do. Is that healthy? Absolutely not. You know, because it does it in a way that causes long-term damage. So, but that is one of their artifacts. They will lower your cholesterol level, there's no question. And that is ignorantly and naively assumed to be a beneficial thing. It's not, because it actually increases your risk of cardiovascular disease, not because the cholesterol is lower, but because these seed oils get integrated into the LDL and they become oxidized and they start the atherogenic process. Not in the plaque out inside the blood lumen, but actually within the vascular wall itself.

So, it just and it just destroys mitochondrial function. It's just a very bad thing. But interestingly, low-fat can be pretty helpful. Denise Minger — just did a lecture she gave like eight years ago

in Iceland and it was about low-fat. And she had this hypothesis that ultra-low fat, we're talking under 10%, which is unsustainable. That's not a long-term healthy goal, but just like low-carb can be highly therapeutic, low-fat can be equally therapeutic and literally cause people to resolve their diabetes, resolve their obesity, autoimmune diseases, MS (multiple sclerosis) disappears. I mean, there's loads of clinicians who have successfully incorporated these approaches and it is really — You can argue with it, but you'd be foolish to because the data is there. I mean, people are getting better. Their lives are being changed by these strategies. So, the goal is to really understand what's happening with those. And I'm not an advocate of a low-fat diet. I'm not an advocate of low-carb diet, but for short-term, these interventions may be highly therapeutic.

Dr. Nasha Winters:

Yeah, I think it's really interesting because when I was in med school in the '90s, the diet of choice for MS was the Swank diet.

Dr. Joseph Mercola:

Absolutely. That was one of the researchers she used to as an example. I mean, he reversed MS.

Dr. Nasha Winters:

Right. I had patients who adhered to that and had great success, and I have patients today who follow Terry Wahls and are doing, basically, a therapeutic ketogenic diet and are having success. So, it's like where I'm curious — As a clinician and a researcher I mean, of course, I'm looking at each patient individually and we're adjusting accordingly, and we're looking at their SNPs and we're looking at their blood biopsies, and we're looking at their labs and their functional medicine. You mentioned earlier rattled off a variety of different amino acids and metabolites, which we test on organic acids profile, which really gives you a lovely in-the-moment snapshot of how someone's utilizing their fats, their carbs, their proteins. And also, what's going on in their gut can really give us a snapshot of what's happening with the microbiome.

So, that's another favorite test we have. In fact, we're working in a lab, we're building, or working to build out a lab where we can test this more in realtime. Because this is something that is so transient and responds day by day. So, we're looking at this metabolomics and this mitochondrial respiratory response to what we're putting in, in realtime so we can start to measure that and know.

Because I suspect that, I mean, my gosh, this is why Richard Feinman's book, "Nutrition in Crisis," was so beautiful. It's like, how can you say that a carbohydrate-rich diet and carbohydrate-restricted diet have the same benefit at the end of the day? Or even a carnivore and a vegan have the same results at the end of the day?

Dr. Joseph Mercola:

Yeah, they frequently do.

Dr. Nasha Winters:

It's that place where it's the individuality. It's what your body needs in this moment. We were talking right before the show of a gentleman who's going through a cancer surgery who spent years being severely protein malnourished. And it's what — On one level, all the longevity researchers will tell you that that guy should be living longer than all of us because you've been, you know, restricting his —

Dr. Joseph Mercola:

Calorie-restricted, yeah. mTOR was minimally activated, which is supposed to be the big bad guy for increasing the risk of cancer.

Dr. Nasha Winters:

Yeah. And so, it's just fascinating to me that we will probably be in these wars, these discussions, these confusing conundrums for forever until we can figure out a way to really test in realtime what's going on with somebody, both at the cellular level and at the more macro-physiologic level to understand what's right. I don't suspect there's a single right diet. I certainly suspect that we would do far better to eat what we evolved with.

Dr. Joseph Mercola:

Which is not a lot [of] seed oils. There's no question. No one evolved with that.

Dr. Nasha Winters:

Exactly. Thank you. And not high-fructose corn syrup.

Dr. Joseph Mercola:

Yeah.

Dr. Nasha Winters:

And not a constant 24/7 access to everything all the time, no matter where you live in the world. Those are things our body's like, "I don't even know what to do with this information." And so that gums up the metabolic works just as much because we're overfed and deeply undernourished. And I think that's the crux of it.

Dr. Joseph Mercola:

So, you had mentioned this mitochondrial lab that you're putting together. I'm assuming it's going to be in Arizona.

Dr. Nasha Winters:

Yep.

Dr. Joseph Mercola:

Yeah, so we had talked, when we had talked in Orlando, you had mentioned that you were getting some property there or have the property already and actually planning and building. Is it an educational facility or is it actually a treatment facility for people with cancer?

Dr. Nasha Winters:

There's two separate — So initially the lab will be our first start, which is happening in the Phoenix area, because we've got access to amazing scientists and research assistance and whatnot, because it's in a medical complex. It's also in an Arizona State University complex. We have access to a lot of people needing to do their post-doc work and pre-clinical work, et cetera.

So, that's where that's starting. But just south of that, an hour-and-a-half south of that, on a piece of 1,200-acre property, a big regenerative farming, organic farming project, we've been gifted a chunk of land to build our Metabolic Terrain Institute of Health, Hospital and Research Center, which is the first of its kind — [a] truly residential truly integrative oncology hospital and research institute.

There are places where you can go and stay, and get "alternative therapy," but most of them are separated out. You can't also get your metronomic chemo. your biopsy, your tissue assays, along with your hyperbarics, your hyperthermia, your mistletoe, along with your dietary interventions that are specific to your n-of-1. You kind of have to go [to] all multiple places to get all of that taken care of today. And maybe even multiple countries, because we're limited to some of the things we can access here in the United States. So, we want to have a place where people can actually come, do a deep dive assessment and actually start their treatment and then be able to go back home to wherever it is.

So we are envisioning folks staying with us two to three weeks to get the full workup, initiate the program, and then getting them sent back home to the growing number of clinicians we are training worldwide in how to support patients from this metabolic approach. So, it's more than just a hospital or a clinic, it's more than just a lab, it's a movement, it's about changing health care as we know it, and it's about impacting oncology outcomes in a way that we've never been able to do before.

Dr. Joseph Mercola:

When do you anticipate the structure will be up and running? Is it like three years, four years, five years?

Dr. Nasha Winters:

Once we have the funding, we could be up and running in 18 months. And we're actively in our capital campaign for the nonprofit aspect of the hospital in the lab. We also have for-profit aspects, our data platform that we're also building, the R&D, the products that are coming out of our lab, those all have investment opportunities.

The wellness destination component of the campus have some investment opportunities for people if you want an ROI. But we have a lot of interested family foundations that unfortunately have walked this path with their loved ones and saw that just standard of care wasn't enough or just alternative care wasn't enough. And there's really never been a place where they've been so elegantly woven together in an innovative and upgraded way, and we're very excited about that. So, we are hopeful that we will get word on funding in the next few weeks, but we are also constantly fundraising, it's a nonprofit hospital and we're not going to be taking insurance. We're not stepping into [inaudible 00:45:37]-

Dr. Joseph Mercola:

Yeah.

Dr. Nasha Winters:

That's the only way we can be effective, honestly. And so, we'll always be fundraising for patient grants so that patients that don't have the means are able to access this type of care. Because right now, truly integrative oncology care is only available to those with resources, and that shouldn't be the case.

Dr. Joseph Mercola:

So, it would be far wiser to donate significant portions of someone's loved one's estate to a venture like this rather than the American Cancer Society, which is the epitome of doing the wrong thing.

Dr. Nasha Winters:

[inaudible 00:46:13] wrong path, unfortunately. And I know it means well, but when you look at the reality of a lot of those ribbon, you know, events and the awareness campaigns.

Dr. Joseph Mercola:

Susan Komen.

Dr. Nasha Winters:

Yeah. The majority of those funds go to paying for the people running it, right? It doesn't go into actually changing research or changing a patient's outcome. And ours, we are being very transparent that as we are putting the vast majority of it. We still have to cover our overhead and whatnot, but we're putting the lion's share of it directly into patient grants to get access to this type of care. It's so important.

Joseph Mercola:

Sure. So what would prevent the local authorities and medical boards from coming in and shutting you down? Because many of these interventions are illegal in the United States. My guess is, and we haven't discussed this, is that Arizona is one of the usual states that have a pretty broad, restricted homeopathic license, which is easy to get if you're a licensed medical professional. and that homeopathic license, a wide variety of options that are typically illegal to do under the regular licensing boards.

Dr. Nasha Winters:

That's a really great question. For the 30 years that I've been on this mission to build this facility, I did my homework, right? I've had to go and figure out what are the most open-minded states of the union. And that would be Florida, Nevada, or excuse me, of medicine. That would be Arizona, Nevada and California. California, no way. There's just first of all, cost-prohibited, red tape of all kinds of things. It's just off the table, right? They might be very provocative with what they're doing, but it's not an environment that's friendly to what we want to build. Unfortunately, nobody really wanted to live in Nevada, so that was off the table.

We also wanted to be in proximity to Mexico if we did need to, if we had. Even with all of our ducks in a row, there's still that possibility of someone coming in trying to shut us down. So, we didn't want to have a loss of our continuity of care. So, we've set up a model that we could have kind of a sister campus across the border if need be.

But because we are a research institute as well, we have multiple IRBs (institutional review boards) to be doing what we're doing. And to Dr. Mercola's point, in Arizona, naturopaths can offer chemotherapy, deliver babies and do surgery. Medical doctors can do acupuncture, homeopathy and nutritional counseling. It is incredibly integrative there. And then you have multiple medical schools, DO schools, naturopathic schools. You also have an integrative medicine program at U of A, which is our neighbor. You have major universities.

So, there's a desire to do things differently. And it's a little bit, I think it's just the West, a little bit renegade, a little bit rebel, a little bit “let's get out of the sandbox and do something different.” And also, Arizona is one of the handful of states that you can just build a hospital. Like it's not — you don't have to go through decades and decades of permitting and looking at this.

We're also in an area that already the county and the cities around us are already welcoming us with open arms. And the person who owns our land has been a long-term builder in in Arizona, really well-known for what he's done. And this is his legacy project. He's in his early 80s now, and this is what he wants to leave the world in a better place. He made his fortunes in building things that might have been extracting of the Earth. Now he's doing something that's giving back in a pretty profound way. And his family is committed to carrying that legacy forward.

Dr. Joseph Mercola:

All right, well, thanks for that diversion. And maybe we can shuffle back to metabolic health.

Dr. Nasha Winters:

Yes, indeed. Yes, indeed.

Dr. Joseph Mercola:

So, I forgot where we left off with respect to — I think it was the discussing the variables —

Dr. Nasha Winters:

Yeah.

Dr. Joseph Mercola:

-when you can transition back to a higher-carb [diet]. You enumerated a wide variety of them, but I'm wondering if there's any specific ones. you know, handful or less that if you looked at those and monitor those pretty regularly, you can get a clue as to, well, maybe it's time to increase your carbohydrate intake.

Dr. Nasha Winters:

I love it. I think the simple [one] would be an HRV (heart rate variability) because that's going to show you how deeply, that's going to really show you the interplay between stress and insulin and it's going to really help you.

Dr. Joseph Mercola:

HRV is not necessarily that simple. It's an elegant test, but there's so many ways to measure it.

Dr. Nasha Winters:

If it starts to drop below 70, you've got some issues. You really want it above 70 to show that you've got optimal regulation of your nervous system and of your metabolic system. It's a very elegant, simple thing. And so, people can really watch themselves. And there's so many different tools on the market today that you can use. It's just kind of work with it —

Dr. Joseph Mercola:

The Oura ring's probably the simplest.

Dr. Nasha Winters:

Exactly. Oura ring is excellent. A lot of people use Biostrap. Some use Fitbit. There's a lot of different ones.

Dr. Joseph Mercola:

No, you shouldn't be using Fitbit.

Dr. Nasha Winters:

Well, because of the — wait, are you talking about the radiation burns?

Dr. Joseph Mercola:

No, I mean, the Bluetooth, I don't think you can put it in airplane mode, but more importantly, in August of 2019, Fitbit was purchased by Google.

Dr. Nasha Winters:

Ah.

Dr. Joseph Mercola:

So, all your data [inaudible 00:51:28]

Dr. Nasha Winters:

Thank you. I did not know that.

Dr. Joseph Mercola:

Yeah, yeah, absolutely.

Dr. Nasha Winters:

Yeah, you want your own data. You want to keep your own data. So, that's important.

Dr. Joseph Mercola:

Yeah, Google's got it and they will use it to manipulate and brainwash you in any way, shape or form that they can.

Dr. Nasha Winters:

No bueno.

Dr. Joseph Mercola:

No bueno Fitbit.

Dr. Nasha Winters:

Thank you for that. I really appreciate that. Learned a huge — this is a big one for me today. The other one is a CGM (continuous glucose monitoring), is a nice one, especially when someone's starting a transition after they become metabolically flexible. [inaudible 00:51:55]

Dr. Joseph Mercola:

Well, let me still stick on HRV. So, what tricks and tips do you implement to optimize or improve someone's HRV?

Dr. Nasha Winters:

I love it. So, I'm simple. I want to watch the sunrise and the sunset every day. That's one way to sort of reset your circadian rhythm, taking in that red frequency.

Dr. Joseph Mercola:

To optimize circadian rhythm, going to bed at the right time, consistently, getting up at the right time.

Dr. Nasha Winters:

Exactly. I want at least two hours between your last meal and your going to bed. I want you to take a walk after each of your meals, even if it's only 10 minutes, just to help your body process, metabolize all that new input that you put in. I want to make sure you're having good sleep hygiene. I want to make sure there's absolutely no light outside of moonlight that might be coming in or starlight coming into your space. I want to make sure there's no electronics in your sleeping space. Turn off your Wi-Fi. You can get kill switches for that part of your house where your bedrooms are.

You can do things like that. You can make sure — if you have to be on any screens after sunset or before sunrise, I want you doing the best you can to mitigate that light. Red lights everywhere. Wear your red-light glasses. A lot of people say that may or may not make a difference.

Dr. Joseph Mercola:

You know what's easier than red-light glasses?

Dr. Nasha Winters:

Let's hear it.

Dr. Joseph Mercola:

Well, this is assuming you're using a large screen, which most people would do. I mean, that's more convenient than looking at your computer screen. So, you can have it operate as a computer monitor. Most of them have an HDMI input. So, it's a monitor and in monitor mode, it does a number of clever things to optimize your circadian rhythm. One is that typically, at least on the LG OLED that I'm using, it immediately shuts down the Bluetooth transmitter.

Dr. Nasha Winters:

Love it.

Dr. Joseph Mercola:

So, there's no Bluetooth because almost every new TV is a smart TV that you can't turn off. Unlike your airplane mode in your phone, it does not do that. But for some reason when at least LG does it, and I suspect maybe there's other models, I haven't done a careful evaluation of all the different brands out there, but LG for sure, there's no Bluetooth, but most importantly, if you're using a computer as a display to generate what you're viewing, and there's a lot of stuff to watch on YouTube and other podcasts and things, then you can use a blue blocker software device and the best one out there —

Dr. Nasha Winters:

[inaudible 00:54:29], which one do you like?

Dr. Joseph Mercola:

Well, the best one is Iris, I-R-I-S.

Dr. Nasha Winters:

Oh yes, yeah.

Dr. Joseph Mercola:

Iris is the best, it blows away. What was the other one you said?

Dr. Nasha Winters:

iFlex or eFlex.

Dr. Joseph Mercola:

f.lux. Yeah, f.lux, yeah, this is the best one. So essentially, this time of year we're progressing towards much shorter nights, or days rather. It starts to get dark well before you go to bed. So it'll be like red and white when you're watching it. Which is safe. It's exactly, you don't need to wear any glasses because it's not generating any blue light.

Dr. Nasha Winters:

I love it.

Dr. Joseph Mercola:

I mean, you can play with Iris. If you want a little blue light and you can see things in more detail, but you can pretty much make it red and white if you wanted to.

Dr. Nasha Winters:

That's so good. And it's a way because we still want to be living on this planet and interacting with our families and whatnot. And that's often a very social connecting time is in front of screen time in the evening. And so that's a really good way to shift it. It's going to be visually different, but you'll get accustomed to it quickly.

Trying to shut down, like having some hard rules about your screen time is really important. And then one little kind of teaser, I tell people.

Dr. Joseph Mercola:

What are the hard rules?

Dr. Nasha Winters:

I do not get on my electronics. Today I'm at 7.30 in the morning, my time when you and I started. I usually don't like to turn on my screens until 9 a.m. after I've been up, done my exercise, taken my walk, had my sun. So, I try to do that, but life happens, right?

Dr. Joseph Mercola:

Right.

Dr. Nasha Winters:

When I'm in my normal routine, I avoid that. And I try and shut it down after 6 p.m. so that I can be in that zone unless I'm in some really big deadlines. And so, that's kind of my personal rule. Everyone kind of knows what works well for them. My blood sugar does go up in front of screen time. So, I can watch that on a CGM.

But usually, I'm also really engaged. You know, I'm a pretty excitable person. So, I think that might be part of it as well. But one other clue I ask people is, "Do you have a difficult time falling asleep?" If they have a difficult time falling asleep, that's a metabolic insulin issue more often than not. And if you have a hard time staying asleep, so if you wake often after you've gone deep into sleep, that often suggests a cortisol problem.

And so, to your point, Doc, that's where we start to go, "Okay, your cortisol's now spiking, you might need a little more carbohydrate into your evening meal to help you keep that cortisol down throughout the night." So, those are just some of the little hacks we've learned over the years and playing with [inaudible 00:57:00] program.

Dr. Joseph Mercola:

Or you could [inaudible 00:57:01] adrenal fatigue, which is the low cortisol.

Dr. Nasha Winters:

Yeah. Actually, you wake when the cortisol spikes, which can often be related to too low blood sugar.

Dr. Joseph Mercola:

Oh, absolutely. It frequently is, especially when you're low-carb.

Dr. Nasha Winters:

Exactly.

Dr. Joseph Mercola:

Because cortisol is designed as your rescue mechanism, keep you alive, because if your blood sugar drops below a certain level, it's different depending on how metabolically adapted, your inability to generate ketones. I mean, for some people it could be in the 20s or 30s. Other people they're dead in the 50s, you know.

Dr. Nasha Winters:

Basically. Exactly.

Dr. Joseph Mercola:

Because they're not able to generate ketones, keep their brain alive. But when it goes that low, you will die. So, unless you have this rescue mechanism —

Dr. Nasha Winters:

Yeah.

Dr. Joseph Mercola:

There's no question that at some point you will die if your blood sugar's too low. So that's why you make cortisol. It keeps you alive.

Dr. Nasha Winters:

Right? Exactly.

Dr. Joseph Mercola:

something you want to eliminate. It's something that's very good, but why be running in stress hormones all the time when you don't need to? That's just not a good, good strategy for long-term health.

Dr. Nasha Winters:

And that's just it. So the labs will give us the big picture, right, that we're doing those monthly labs and those quarterly labs. But the living laboratory aspect between CRPs and the HRVs and the continuous glucose monitors and watching just your day-to-day rhythm and your day-to-day sleep process, that's gonna be the feedback we need to know, "Okay, it's probably time to adjust your macros that is more life-giving and life-supporting versus taking away." We've gone in, we've done our job, we've insulin-restricted. Now, it's time to tackle the other big drivers of what's going on for those folks.

So, I think it's just this place where I was talking about the three S's, sugar, sex, and stress. So the hormonal implications, the insulin implications and the stress response implications. If you don't deal with all three of them, you're kind of dead in the water. It's not going to allow you to make the impact you want on your clinical outcomes.

Dr. Joseph Mercola:

It's a pretty fascinating and comprehensive approach. So, you seem to get pretty good results with it.

Dr. Nasha Winters:

Yeah. I do, Doc. And that's the thing is what I love is, like you, the way I think today is different than what I knew two years ago, five years ago, 10 years ago, 20 years ago, and what I so appreciate about these types of conversations we're able to have here and in the public is that we're constantly learning each time we think we have it figured out, I get humbled, right? It's like, "Oh, nope, something to consider."

So, I think that's what I just want people to [do]. Be encouraged to understand that you've got to just be willing to be flexible also in your understanding of things, not just metabolic flexibility, but be flexible to understand your own feedback loops, your own body's cries for help, your own body's responses to whatever therapeutic intervention you're using. And don't follow dogma. Follow your own data.

Dr. Joseph Mercola:

Yeah, yeah. That lack of humility and intellectual hubris that most physicians have is just a rapid shortcut to devastating clinical results because they're not open to these novel approaches and they lost their flexibility, because I believe one of the biggest variables is they've been so effectively brainwashed by the propaganda from the drug companies.

Dr. Nasha Winters:

Unfortunately.

Dr. Joseph Mercola:

And the drug companies are extended into peer-reviewed journals, their own peers, the hospital reviews, the standard of care. There's a lot of variables going on that reinforce that intellectual hubris.

Dr. Nasha Winters:

Definitely. Absolutely. Definitely. And I can remember when I was in med school back in the early '90s, their textbooks did not have any drug ads. They all do today. [inaudible 01:00:45]

Dr. Joseph Mercola:

So do commercials on TV.

Dr. Nasha Winters:

Totally, and that's not even legal in other parts of the world, right?

Joseph Mercola:

I know. Most of the world. It's only in New Zealand and the U.S. where it's legal.

Dr. Nasha Winters:

So strange. And then to have like entire wings of hospitals or research institutes that are funded by drug companies, I mean, it's going to be really hard to overcome that conflict of interest. Even if you try to come at it the best you can, there's that filter. So, we have to try and find — That's why we're also building this lab, is we want to be an agnostic lab asking questions. We're not going in with our expectations of what we want to see. We're going in saying —

Dr. Joseph Mercola

Yeah.

Dr. Nasha Winters:

-“We have no idea, tell us what we're seeing, show us the way.” And so that's a very different approach to research as well.

Dr. Joseph Mercola:

Yeah, I'm looking forward to when that lab's completed because you have some ambitious goals and one of them is to be developing the most sophisticated commercial assay to assess mitochondrial function. Because we really don't have a good tool to do that now. We just don't. Outside of a research lab.

Dr. Nasha Winters:

Yeah, yeah. And we've got, like you said, we've got some good surrogates, but we think we've got some pretty good ideas that we're on the right track to get something that actually is more tangible and in the moment testing that can really help elucidate what's really happening with the patient to actually show us if we're being effective with whatever therapies we're using. And also give us an early warning sign if we need to change gears. I think that's one of the big things, especially in the oncology world. By the time it's big enough and loud enough to capture our attention that, hey, we're steered off the road. That can be life-taking for many people. And so we want to be ahead of that.

Dr. Joseph Mercola:

For sure. Do you have some insights or impressions initially that there is a homogenous distribution of mitochondria with respect to their function so that the mitochondria in one tissue is essentially equivalent to the other tissues, or is there going to be a wide disparity so that you have to almost be tissue-specific to measure the specific mitochondria?

Dr. Nasha Winters:

I suspect the latter. And that's why I think it's difficult to say blanket, just give this one therapy and it's going —

Dr. Joseph Mercola:

Yeah, yeah, yeah.

Dr. Nasha Winters:

And so that's what's going to be interesting, is even some of the novel delivery systems we're looking at, we can even specifically target specific mitochondria tissues and certain specific mitochondria. And so that's what I'm excited [about], is I think that we are really going to get to a very intricate and specific approach here. not too long, which is exciting to me to see where this next step is going to do for medicine in general, but oncology, in particular. Even the world, one of our big researchers, he's also really big in the autism space. There's so much at this mitochondrial level. We've got a lot of interest and passion to get some answers to know how to individuate the therapies in a way that's meaningful. And stop getting that confusion of like, "Well, why does it work in this person, not in this person?" and "Why does this diet work here and not here?" I think we're going to get much closer to those answers.

Dr. Joseph Mercola:

So, what practical step can someone take to celebrate Metabolic Health Day in October 10th?

Dr. Nasha Winters:

First of all, the best thing I think anybody could do on Metabolic Health Day is to assess their metabolic health. Don't assume, especially when Dr. Joe is telling you that less than 5% of us are metabolically healthy. And so, I would encourage you, if you don't have a physician already, there's plenty of direct-to-consumer labs out there. One of our partners is a lab that even offers greater discounts than that. That's one of the people supporting this Metabolic Health Day.

We're not attached to where you do these labs. Maybe your physician is going to be part of this. We have a lot of clinics and hospitals joining this movement as well. We have one group that's getting ready to do a summit where they're really offering people a great discount on metabolic health assessment. And so, simply speaking, get your CBC, your CMP, your fasting insulin. At the very least, that's where I'd start.

And then if you want to look a little deeper, add your C-reactive protein, your high sensitivity, your quantitative C-reactive protein to get a sense of your inflammatory response. That's a surrogate for a lot of things going on. And a vitamin D level. That's my favorite, just to like, just get a sense of what your baseline is, to know how your body's even utilizing certain fats and how it's self-regulating with insulin, self-regulating with cortisol, self-regulating with inflammation and immune function.

So, that would be a great place that would help your clinicians, myself included, be able to better support you and help you understand how hard you have to work to bring yourself back into balance. I think that's very illuminating for folks who think they're healthy because if I had a dollar for every time a patient said I was healthy until I got cancer, I could have retired a very long time ago. We could have built this hospital years ago. And so, I want people to use that day of awareness, not just like, "Oh, yep, it's the day." Do something about it. Take action now. Don't wait. Don't wait.

Dr. Joseph Mercola:

Yeah, so I love the hs-CRP and I've just recently established a Labcorp account, which is there's only two major commercial labs in the U.S., Labcorp and Quest. And in Labcorp, there's probably a half a dozen or more types of CRP that your physician could order. But if you order one that's called the cardiac CRP, C-reactive protein, it's about the same price as a quantitative one and you'll get the number down to second digit, you know, so it's really, really accurate. And because it's kind of meaningless if it says less than one, I mean, it's good, but it's not, you know, it's not the level you want to know. Cause there's a big difference between 0.15 and 0.8.

Dr. Nasha Winters:

Absolutely, absolutely. Yeah.

Dr. Joseph Mercola:

Yeah. So that, that test, I mean, it costs the physician somewhere about \$10. So, it should be pretty inexpensive to do.

Dr. Nasha Winters:

Amazing. Yeah.

Dr. Joseph Mercola:

So anyway, that's a good test. Anything else other than getting your lab test for that to celebrate?

Dr. Nasha Winters:

I just want people to go out and like, don't go out and celebrate with a big, like junky, like Dairy Queen, you know, Blizzard. Like, that's just like all the fake oils, all the different things. Be conscious of what you're putting into your body, you know. Start to get curious about reading your labels on your food and see how much of that linoleic acid is sneaking in. See how much processed food is still hiding out in your fridge, your freezer, and your pantry and get rid of it. Go back. to what your parents, grandparents, great grandparents were eating, is a simple strategy to just start weeding things out of your life so you can really impact change in your mitochondria.

Dr. Joseph Mercola:

Sounds terrific. All right, well, thanks to you for everything that you are doing. I really appreciate that.

Dr. Nasha Winters:

Thank you.

Dr. Joseph Mercola:

And for establishing this novel day to help us help the population wake up to realize we've got to recover our metabolic health.

Dr. Nasha Winters:

Absolutely. Thank you for all you do in the metabolic health space in particular, Doc. So really appreciate it.