The Hidden Dangers of Oxalate in 'Healthy' Foods
A Special Interview With Sally K. Norton
By Dr. Joseph Mercola

Dr. Joseph Mercola:

Welcome, everyone. Dr. Mercola, helping to take control of your health. And today, we are joined by a repeat guest, Sally Norton, who is the maven of oxalates. She is the expert, and if you need to know anything about it, you'd be foolish not to consult with her material first because that would be the most efficient way to get up to speed on this. So, welcome and thank you for joining us today.

Sally K. Norton:

Thank you. It's lovely to be with you again.

Dr. Joseph Mercola:

Yeah, and you've got a new book out, which I haven't received yet, but it's coming.

Sally K. Norton:

It's coming.

Dr. Joseph Mercola:

You can show it. There you go. This is the companion book. This is the book everyone's been waiting for because the problem with oxalates is that you really can't trust or rely on most of the data sources. So, you need someone expert to vet them and spend painstaking years going through the data and compiling accurate lists. So, thank you for doing that.

Sally K. Norton:

Absolutely. It is a labor.

Dr. Joseph Mercola:

Yeah, for sure. And it didn't exist. You had to piece it together. You had it in your head, and you would tell people when they asked questions, but we needed a definitive resource. And sadly, that's the State of the Union as it is today with respect to oxalates and many other food nutrients, too. Your degree is in nutrition, isn't it? Or dietary sciences? [inaudible 00:01:18]-

Sally K. Norton:

Yes. Yeah, nutrition. Human nutrition, right.

Dr. Joseph Mercola:

Yeah, human nutrition. So, you have an M.S. (Master of Science) from Cornell?

Sally K. Norton:

Yes.

Dr. Joseph Mercola:

Okay. So, you're quite familiar with the field and you know that many nutrients suffer similar consequences. Some of the data hasn't been updated for 50 years or longer. And it's quite [crosstalk 00:01:34].

Sally K. Norton:

Absolutely. They lost complete interest in it.

Dr. Joseph Mercola:

Yeah, yeah. Actually, I'm going to head up a project to solve that. Well, probably, I'm developing a number of new entities. One of them is Mercola Labs, and we'll probably run the test to figure that out and publish it and update the data systems. Why not? Because that's what we do. That's what we do.

Sally K. Norton:

There's a lot of work to be done, and even just with the oxalates, it's huge.

Dr. Joseph Mercola:

Yeah. Yeah. So, it's been a while. It's been over a year since we last connected, I think, maybe two.

Sally K. Norton:

Yeah, a year. Or a year and a quarter at least.

Dr. Joseph Mercola:

Okay. A year to two. Yeah, at least a year. So, there's been a lot of changes in my personal understanding of human biology, and I'm really interested to dive deep on it because I think – First of all, I want to acknowledge that there's no question, I've had a lot of updates since our last time, but there's not a doubt in my mind that oxalates is a big issue that isn't appreciated by most people, certainly most health professionals. And as I said, you're the maven and you've got the work.

I can put a link to our previous interview. Because I didn't want to go over old stuff, but I want to go over some of the new stuff and we can highlight some of those things, too. But the new understanding I've developed or evolved into is – and this is the primary catalyst for this conversation because I wanted to discuss it with you, and we thought we would capture it for

everyone to have this evolution occurring. So, I think we're both in agreement that most people are not metabolically flexible. They've lost the ability to maximally produce cellular energy in the form of ATP (adenosine triphosphate) because of a variety of problems.

And I have a better understanding of why I think that is. And it's not because they just are eating too many carbs. That is for sure. That is not the reason. I believe it's related primarily to three things. One is the most pervasive metabolic toxin in our diet, which is linoleic acid. [It] destroys, destroys cellular energy production. Following close behind is estrogen, and following behind that is endotoxin. So, those are the three culprits. So, let's stop there. Do you have any response to that?

Sally K. Norton:

Well, I certainly agree that cell membranes and our hormonal state are a mess. And I don't know how universal the endotoxin issue really is. I haven't had the ability to be that focused on other things because we're still trying to figure out this whole revolution that is the understanding of oxalates being so toxic, being such an interferer with metabolism, at all levels. Oxalate is another big one that's messing up mitochondrial health, your ability to generate energy.

Dr. Joseph Mercola:

It's intimately related to endotoxin in an indirect way, which I'll explain in a moment. At least I believe it's. It's paired, and if you don't understand those two, you're not going to be able to navigate through to get to home because – Well, let me state this. I have suffered with an oxalate rash, and I didn't know it was an oxalate rash until a few years ago, and I had it for 15 years. It was driving me nuts. It was so intensively itchy that it would wake me up in the middle of the night. And they were definite rashes, and they would last for months unless I aborted the scratching phase, which was hard to do because they were so intensely pruritic or itchy that you couldn't do – It would wake me up out of a sound sleep. That's how bad the itching was, [it] almost would drive some people to suicide it was so intense.

Sally K. Norton:

And worse overnight.

Dr. Joseph Mercola:

Yeah, I guess it did. I've evolved into a place where I was able to identify a powerful symptomatic remedy, which probably has some other therapeutic benefits on my microbiome, which is aloe. And I have a yard of a thousand aloe plants, so I have an unlimited supply, essentially a lifetime supply, and I can grab fresh aloe and do it. And that would definitely-

Sally K. Norton:

Did you ever try topical calcium on it?

Dr. Joseph Mercola:

I never did, no. That would [inaudible 00:05:58]-

Sally K. Norton:

That is amazing. Calcium citrate with a little bit of [inaudible 00:06:02].

Dr. Joseph Mercola:

How come you never told me that?

Sally K. Norton:

You didn't ask.

Dr. Joseph Mercola:

Oh, man.

Sally K. Norton:

It's amazing. In 90% of cases, you can cut that itch and resolve –

Dr. Joseph Mercola:

It makes perfect sense.

Sally K. Norton:

[Inaudible 00:06:12] an old remedy from the 1900s.

Dr. Joseph Mercola:

You can actually precipitate out the oxalates that way. Makes perfect sense, makes perfect sense.

Sally K. Norton:

See, this interference with electrolytes and calcium is a major toxic effect. And as the immune system is trying to deal with those oxalates in the subdermis and so on, you're getting additional electrolyte disturbances. And there's more to – I don't really know the mechanism of why that calcium topically is so powerful, but it's amazing.

Dr. Joseph Mercola:

No, we just shared it. It binds the oxalates.

Sally K. Norton:

It's more than oxalates. It’s any skin injury.

Dr. Joseph Mercola:

Oh, really?

Sally K. Norton:

Any skin injury. People who are doing hair removal or whatever, and damaging their skin, putting that calcium on top of it, it just heals overnight.

Dr. Joseph Mercola:

That's a good clue. That's definitely a good clue. Now-

Sally K. Norton:

I would love to know more about why that works so well.

Dr. Joseph Mercola:

When I first started clinical medicine, calcium was a hot topic and there was a big thrust – this was in the '80s, which you may recall – of pushing people – Because we're similar ages, I think, or close.

Sally K. Norton:

Well, a little younger.

Dr. Joseph Mercola:

Yeah, a little, yeah, but similar. There was osteoporosis and everyone was on calcium, and I think it was overdone.

Sally K. Norton:

I was on a project at Cornell calling up people in a research study to find out how much dairy products they were eating.

Dr. Joseph Mercola:

Yeah, yeah. And dairy is the best source of calcium, I believe.

Sally K. Norton:

Yeah. And traditionally, a lot of calcium just came from water. Natural water is loaded with calcium.

Dr. Joseph Mercola:

Hard water. But were people able to absorb significant quantities of that?

Sally K. Norton:

Yeah. The research suggests that mineral water is a very bioavailable source of calcium. And I think that was human's traditional source.

Dr. Joseph Mercola:

Yeah. It would make sense. So, then there was a pushback and there were some individuals – So, the pendulum swung in the other direction, and there was a war against calcium, and excess calcium was the devil. I think largely precipitated by the fact that calcium is precipitated out in these atherosclerotic plaques. And it's just an innocent bystander, very similar to the way glucose is, or even insulin.

Sally K. Norton:

Yeah, it's a victim of the whole problem basically. And interestingly, you can see it in the primary hyperoxaluria literature where high oxalate levels turn fascia and other connective tissues into calcified sheets. You can see it in the X-rays in these kids that end up dying of oxalate poisoning that just because the body is high-oxalate, that causes calcification in tissues.

Dr. Joseph Mercola:

Yeah. Now, I had kidney issue, damage. Renal insufficiency, more precisely, as a result of mercury exposure from some improperly removed amalgams in 1995. And so, that made my kidneys susceptible, and I had to be really careful with protein intake. I wasn't taking extra calcium, certainly not as a supplement or in food. I had dairy, maybe, especially recently, a cup of raw goat's milk a day, but that still wasn't a lot of dairy. And then I started eating cheese, which is a lot of calcium, a lot of protein too.

The interesting thing about cheese as a dairy source of calcium, like milk, it's high in calcium, but it also has phosphorus in it. But the phosphorus is relatively low. It's a 2-to-1 ratio. And it turns out – I didn't realize this until I started because I noticed pretty dramatic improvement when I added the cheese in. But it was a special cheese. The reason I avoided it before is – and this is not related to oxalates, but it kind of goes into it and we've got some time to discuss it. The reason I avoided it [is] because I noticed anytime I had cheese, my kidney function would deteriorate quite dramatically, quite dramatically.

And then I have a new favorite mentor, collaborator, in energetic medicine, especially Ray Peat's principles, Ashley Armstrong. And she helped me understand, you would probably know this because you're really bright, that most cheese should not be eaten, maybe 95% of the cheese in the country. Do you believe that?

Sally K. Norton:

Well-

Dr. Joseph Mercola:

Well, let me finish.

Sally K. Norton:

Definitely on the American market, yes.

Dr. Joseph Mercola:

Okay. And why is that? Why is that? Why do I say that astounding statement?

Sally K. Norton:

Why is the cheese unfit to eat?

Dr. Joseph Mercola:

Yes. One reason.

Sally K. Norton:

You tell me.

Dr. Joseph Mercola:

The enzyme they're using.

Sally K. Norton:

Yeah, right. It’s GMO (genetically modified organism).

Dr. Joseph Mercola:

They're not using animal rennet.

Sally K. Norton:

Yeah, they're not.

Dr. Joseph Mercola:

And you knew it, but most people [don’t]. I didn't know it.

Sally K. Norton:

Yeah.

Dr. Joseph Mercola:

So, I want to say this in a lot of different interviews I do to reemphasize that fact, that you should not be purchasing or consuming cheese unless you see the label and it says animal rennet, stay away from it.

Sally K. Norton:

How things are produced is so important. The traditional food preparation works well. And all the shortcuts of modern-

Dr. Joseph Mercola:

Bad news.

Sally K. Norton:

-manufacturing has really destroyed food.

Dr. Joseph Mercola:

It did. It has. There's no question. So, then Ashley helped me understand that. And she has a company, Nourish [Cooperative], I think it is, that sells these things. So, she sent me some and I overdosed, and I had a pound a day for a while.

Sally K. Norton:

Cheese is pretty addictive.

Dr. Joseph Mercola:

Yeah, it is. I just went crazy, especially since it ostensibly wouldn't harm my kidneys. And my creatinine was 1.4 [mg/dL] and it dropped to 1.2 [mg/dL] by radically increasing my protein intake and cheese. So, it was like a miracle.

Sally K. Norton:

Well, and you increase your calcium intake and depending on-

Dr. Joseph Mercola:

And it binds to phosphorus, and phosphorus is a deadly [inaudible 00:11:53].

Sally K. Norton:

It binds the oxalates.

Dr. Joseph Mercola:

And it binds to oxalates, too.

Sally K. Norton:

It encourages oxalate clearing depending on how much oxalate is already in the diet. Once you're low-oxalate, adding more calcium can increase the mobilization of oxalate.

Dr. Joseph Mercola:

Absolutely. No question. Yeah. So, a refinement of some of the – because I don't think we last talked since I've been embracing Ray Peat's work, but he triggered me – Because one of your strategies to bind oxalates is the citrates. And chemically, there's no question-

Sally K. Norton:

The citrates are dissolving oxalates. They're also alkalizing because this whole process of the immune activation from the oxalates [inaudible 00:12:28]-

Dr. Joseph Mercola:

But you actually, as I recall, don't consume the citrate directly as a supplement. You take a lemon, I believe.

Sally K. Norton:

I used to. My system is pretty intolerant to things these days and I'm sort of allergic to the fruits.

Dr. Joseph Mercola:

Okay, all right. Well, that's fine. But you were recommending I think that was [crosstalk 00:12:46]-

Sally K. Norton:

I do like lemon juice. It's amazingly powerful. I get tremendous results with my clients.

Dr. Joseph Mercola:

Yeah, and it's more natural. The problem with the citrate molecule, like magnesium, potassium, calcium-

Sally K. Norton:

Calcium. Yeah, it's manufactured citrate.

Dr. Joseph Mercola:

It's manufactured citrate. And there are problems with the citrate molecule. There's some toxicity to it that's not fully appreciated. So, I avoid them. I think it's not a wise idea to take that as a supplement. I used to, but I don't anymore.

Sally K. Norton:

I'm not using them myself, but sometimes they're just amazingly therapeutic.

Dr. Joseph Mercola:

Yeah. It's like a drug. Of course, it's not that dangerous short-term, but it's not something you want to consider long-term. I think it's probably unwise. But it's safer than a lot of drugs, that's for sure, for darn sure.

Sally K. Norton:

That's important for people to understand, not to be so paranoid about everything that they're wringing their hands and we don't need to create more paranoia and unhappiness.

Dr. Joseph Mercola:

I agree. I agree. So, let's diverge into – I think you shared it in your previous book, but this is something I became aware of through another podcast I was watching with Chris Masterjohn and, I think, Dave Asprey. If not, [it's] with someone else. And Chris shared an interesting fact about oxalates. It's dicarboxylic acid, which you know. And what is that molecule?

Sally K. Norton:

Two carbon dioxides.

Dr. Joseph Mercola:

Two carbon dioxides. That's it. That's all it is. Two carbon dioxides. And carbon dioxide is one of the most useful molecules to human biology. Absolutely. Unequivocally, it is. So, you have to think how on God's living Earth would combining two carbon dioxide molecules be damaging to human biology? That's the question.

Sally K. Norton:

It's incredibly damaging.

Dr. Joseph Mercola:

No dispute. But the question is why? Is it-

Sally K. Norton:

It's just a small molecule.

Dr. Joseph Mercola:

It should not be.

Sally K. Norton:

But that's not how the plants make it. That's actually not how it's made in nature.

Dr. Joseph Mercola:

Okay. But it's still the same thing.

Sally K. Norton:

It’s the oxidative end product and plants make vitamin C principally, and they have other ways of doing it too, but principally, they make ascorbic acid and turn that into oxalic acid.

Dr. Joseph Mercola:

Right. But you wind up with these oxalates that – The puzzle, as I perceive it, and I think I've got the answer. This is why I'm so excited to connect with you, because there's no better-qualified person on the planet, I think, than you to discuss this. And I didn't want to do it on a phone call. I wanted to do it so everyone could capture it and learn from it as I'm learning, because I think it's correct, but I wanted to validate with you. Because in theory, it should not damage your biology, but it does. No question. And I believe – Let's get back to this metabolic flexibility. I'm basing my information on the NHANES (National Health and Nutrition Examination Survey) data. It was 2018 data, I believe. It was published in 2022 or 2023, but it was already 4 years old. And that data showed 93.1% of the population was metabolically inflexible.

Sally K. Norton:

93 point something?

Dr. Joseph Mercola:

0.1%.

Sally K. Norton:

Even NHANES data shows that?

Dr. Joseph Mercola:

But NHANES data was from 2018. And the NHANES data before that was like 89%. So, it had gone up 4%-

Sally K. Norton:

That's remarkable.

Dr. Joseph Mercola:

-in a few years. So, the data now is 5 years old, and my guess is it's probably between 96% and 97%.

Sally K. Norton:

This is adults, right?

Dr. Joseph Mercola:

I believe that was the case, yes. Although it's probably transferring down to kids now because-

Sally K. Norton:

Everything's been falling lower and lower.

Dr. Joseph Mercola:

Yeah. Children have unbelievable resiliency. It takes a lot to kill a child because they just recover. That's biology. Biology wants to keep us alive, and they give extra superpowers to children. Children are honestly-

Sally K. Norton:

It's also the time that your whole potential in life is set. That first 1,000 days, from conception to age 2, that determines your real potential in life.

Dr. Joseph Mercola:

Yeah, it does. It's so crucial. And certainly, human food is important, but in that window, there's a nutrient that we know about it [but] it's never really, at least as far as my review or exposure to the literature, really emphasized, and that's love.

Sally K. Norton:

Nice.

Dr. Joseph Mercola:

If you don't love your kids, it's not going to work.

Sally K. Norton:

It's called failure to thrive. If children are neglected heavily, they just die.

Dr. Joseph Mercola:

But it's not just dying. That's the most extreme example. But they don't evolve and mature into their maximum potential. It's impossible almost.

Sally K. Norton:

Right. We need real loving attention of all kinds.

Dr. Joseph Mercola:

Yeah. But that's a tangent, and I wanted to get back-

Sally K. Norton:

It's a profound center for how to be a human being. We worry so much about eating right and yet let's get the human family back together.

Dr. Joseph Mercola:

Yeah, that's the key. And we're talking about authentic love, not just saying the words, but actions and behaviors. Unconditional love for kids. And unfortunately, the problem is, the reality is that most parents have not been loved and they're handicapped, and it's just this vicious cycle. So, it's difficult to blame the parent for making a conscious choice when they don't really have the ability to do that.

Sally K. Norton:

Trauma is passed from generation to generation.

Dr. Joseph Mercola:

Yeah, yeah. So anyway, let's divert back to dicarboxylic acid. Why the heck would that harm human biology? So, we get in a bit [to] metabolic flexibility.

Sally K. Norton:

[inaudible 00:18:35] charge on it. It's super electromagnetic.

Dr. Joseph Mercola:

I don't want to go to physics. We know why it does, but I believe there's something that's happened in biology.

Sally K. Norton:

Like God?

Dr. Joseph Mercola:

Like what, like God?

Sally K. Norton:

What did God do when he put these two together?

Dr. Joseph Mercola:

Yeah, yeah. No, no. He knew what he was doing. Well, at least I believe. So, let me extend the story. So, we've got 97%, at least people who are metabolically inflexible. They are not healthy. This is a leap. So, we establish that as a fact. 97% of people are not making maximum cellular energy. One of the consequences of not having enough energy is that you cannot maintain a low oxygen gradient in the large intestine. Why the hell is that important?

Well, I believe, and I'm a new convert to this. I dismissed it for many years. And all of us in nutrition have heard that the human microbiome is crucial. It's critical. It's the most important. And I've come around to that realization [or] belief, and I believe that's accurate, that if you don't have a healthy microbiome, it's almost impossible to be healthy. It's almost impossible to be healthy.

Sally K. Norton:

Who has a healthy microbiome?

Dr. Joseph Mercola:

Less than 97.1%, that's for sure. Actually, that's the – whatever, 3%. Because they don't create enough cellular energy and they can't exclude the oxygen from the large intestine. It's important to realize that 99%+ of the bacteria that live in your intestine, which is [where] most of the bacteria in our body is in the large intestine. It's a special place. And if there is even a tiny amount of oxygen, you disrupt your whole biology there. And these microbes that were designed to be there when you were making enough cellular energy cannot exist.

It's physically impossible because it's a simple thing. They're called obligate anaerobes. That means they absolutely are – They die when they get exposed to a molecule of oxygen. It just doesn't work. They were never designed-

Sally K. Norton:

It's amazing they can exist at all given the ubiquity of oxygen.

Dr. Joseph Mercola:

Yes. Well, the amazing thing is that-

Sally K. Norton:

How is it possible that they get into us and can live there?

Dr. Joseph Mercola:

Because we can create cellular energy to create this absence of oxygen or intestine. This is the key. I'm coming to a point, believe me, this is not-

Sally K. Norton:

Yeah, but where's the seed for all of that? Where are they coming from from an anaerobic phase?

Dr. Joseph Mercola:

Well, that is a good question. I have not thought about that, but I can understand how it would work. But most likely it's seeded-

Sally K. Norton:

[Inaudible 00:21:17] rocket ship from anaerobic land down in the soil.

Dr. Joseph Mercola:

No, no. If you trace it back, it came from the environment. Yeah. Earth started in [an] anaerobic environment. There was no oxygen on Earth. There was no oxygen. Molecules of oxygen did not exist, except maybe embedded in some stone somewhere, but it wasn't in the air. It was zero until bacteria evolved to actually take fuel, like carbohydrates and fats, and use it and burn it in a way that creates carbon dioxide and oxygen and water.

Sally K. Norton:

Amazing.

Dr. Joseph Mercola:

I'm sorry. No, it was the bacteria that did that. They did that in glycolysis. I think glycolysis makes oxygen, doesn't it? It uses – No.

Sally K. Norton:

Pyruvate – Oxygen, I don't know.

Dr. Joseph Mercola:

I forget where oxygen – Oxygen is produced by the bacteria. No.

Sally K. Norton:

[inaudible 00:22:14]-

Dr. Joseph Mercola:

It's produced in chloroplast, in chloroplast. Plants produce oxygen.

Sally K. Norton:

Plants produce oxygen.

Dr. Joseph Mercola:

Yeah. That's what produced the oxygen that created the food for the bacteria. I got it mixed up. Sorry.

Sally K. Norton:

Originally, algae.

Dr. Joseph Mercola:

Right. The algae, plants. I think algae and phytoplankton are probably the largest producer of oxygen in the world, as I understand. Trees do good, but it's mostly the phytoplankton.

Sally K. Norton:

That's why they often say the oceans are the lungs of the planet.

Dr. Joseph Mercola:

Right. Because they're respiring, they're producing oxygen. And so that shifted things and allowed bacteria to live and produce energy more efficiently because you can burn – It's 18 to 20 times more efficient to burn fuel with oxygen than without it.

Sally K. Norton:

Yeah. Just blow a little air on your fire and you'll see that.

Dr. Joseph Mercola:

Yeah, absolutely.

Sally K. Norton:

That's what the bellows are for.

Dr. Joseph Mercola:

So, we've got this environment where we have decreased cellular energy, as a result of that there's this gradual shift of bacteria that occurs in your microbiome. Ideally, it should be mostly obligate anaerobes. But when you got the oxygen peeking through, then you get something called the facultative anaerobe, which means it can tolerate oxygen and survive.

And the interesting thing is that the obligate anaerobes are almost universally considered beneficial bacteria. And although they have endotoxin, which is also called lipopolysaccharide, embedded in their cell walls, it doesn't appear to be that toxic, it's somehow immune-buffered in some way where it doesn't cause the issues, which we referenced earlier. Endotoxin is a huge problem.

But these facultative anaerobes that come in when there's oxygen there, those guys, it's a little different story. They have the endotoxin that can damage you. And it damages you indeed. And one of the problems when you don't have these obligate anaerobes, and the classic one would be Akkermansia. Have you heard about Akkermansia before?

Sally K. Norton:

Just vaguely. Yeah.

Dr. Joseph Mercola:

Yeah. Well, that's about right. And you're [a] pro in nutrition and you finished your training long before Akkermansia was discovered. It was discovered in 2004.

Sally K. Norton:

No, we didn't talk about bacteria really, even in integrative health until about 1999. Microbiome was just getting into vogue.

Dr. Joseph Mercola:

And that's largely – It was almost impossible to culture these things in a lab, because as soon as it hits oxygen is dead. So, the way these were discovered were through DNA sequencing. That's how they figured it out.

Sally K. Norton:

The human microbiome, the whole microbiome, yeah.

Dr. Joseph Mercola:

Yeah. So anyway, one of the benefits of these species like Akkermansia is they make mucin, which even if you have leaks or holes in your gut, sometimes called leaky gut, which is a huge problem because not only can the food molecules and proteins come in contributing to allergies and a whole variety of other complications, but also this endotoxin can seep through and just destroy your health. And in fact, many people, they die from it. It causes septic shock. It's a big, big problem.

And if you look it up, it surprised me when I first encountered this, but a lot of people die every year from septic shock. And it's usually related to the gut because the gut is messed up. So anyway, one of the obligate anaerobes other than Akkermansia, which is probably the keystone species, is another one, which you've heard of before. It's called Oxalobacter, right?

Sally K. Norton:

Mm-hmm.

Dr. Joseph Mercola:

And the benefit of Oxalobacter is it digests oxalate crystals.

Sally K. Norton:

What it does is it tells the gut wall to excrete oxalate to give it something to eat.

Dr. Joseph Mercola:

Yes. But it does digest it.

Sally K. Norton:

Right. And that's in an excretion process coming out of the bloodstream.

Dr. Joseph Mercola:

Yes. So, it helps essentially lower your oxalate level.

Sally K. Norton:

That's already been absorbed, right.

Dr. Joseph Mercola:

Yeah, absolutely. Which is a big part of it.

Sally K. Norton:

Not from the absorptive sites. Because of course, you're absorbing your [crosstalk 00:26:26]-

Dr. Joseph Mercola:

No, no, no. But eventually-

Sally K. Norton:

-you're absorbing your oxalate, and then the colon is attempting to help, and the Oxalobacter is there going, “I'm here. Give me some, it's my dinner.”

Dr. Joseph Mercola:

Well, here's connecting the dots, so we're very close, which is what I want to discuss with you. And I had to give you all that preface to ask this question. So, my observation personally, a study, and of one, is that my oxalate rash disappeared when I optimized my microbiome. Disappeared. I don't have an oxalate [rash]. I stopped using aloe months ago. No need for it. If it ever comes back, I'll try the calcium, but there's no need for it now because I don't have to. It's gone after 15 years.

And my supposition is – we can discuss if you're interested, and some of the other things I've done to optimize my microbiome. There's probably less than one person in 100 who has an optimized microbiome. I'm close. It's almost to the point where you can use my stool as a fecal microbiome transplant. No, I'm serious. You laugh but look, there are diseases like Clostridium difficile, as you well know, that kill people every day. As we're talking, people will die from this infection.

Sally K. Norton:

And it becomes more of a problem.

Dr. Joseph Mercola:

Yes, it has because [of] the microbiome problems. And the traditional conventional treatment is to go on more antibiotics, which contributed to it to begin with, but that works maybe 70% of the time. The other 30% of the time, you're dead. You are dead. And my old girlfriend had a relative, and I knew this 10 years ago, and the guy had Clostridium difficile infection. They want to do antibiotics. I said, "No, they're going to kill him. Put him on the fecal microbiome transplant." Which even now is still somewhat experimental, though many hospitals will do it.

Sally K. Norton:

It's more common now. Yeah.

Dr. Joseph Mercola:

Yeah. It's more common [now]. But back 10 years ago it wasn't, and he didn't listen to me, and he died. It was simple. And the success rate for FMT, fecal microbiome transplant, is close to 100%. Close to 100%. So why would you not do it?

Sally K. Norton:

That's what the experts say. I haven't heard that to be true among my clients.

Dr. Joseph Mercola:

Okay, well, probably you need an ideal donor. That would be the key thing. And I think I know how to identify that donor. They have to have a high concentration of obligate anaerobes in their microbiome like Akkermansia and others, because then those are the seeds.

Now, fortunately – Well, unfortunately, I guess, until now there is one company that makes – Actually, there are several companies. There's only one that really has a legitimate claim on making Akkermansia, but it's not that good. It's almost worthless, actually.

Sally K. Norton:

It's so tricky to package.

Dr. Joseph Mercola:

Yeah. Well, not just package, but to manufacture. It's a literal nightmare. It requires-

Sally K. Norton:

That would be super expensive.

Dr. Joseph Mercola:

It requires over $100 million, just in equipment, to be able to culture it and manufacture it and put it in a bottle.

Sally K. Norton:

And then the quality control, how do you do that?

Dr. Joseph Mercola:

Oh, it's just awful. Sally, we are getting close. There will be quality products on the market this year. We will be the first company to start selling them.

Sally K. Norton:

Wow.

Dr. Joseph Mercola:

We are looking at the leading producers in the world right now. We're going to work out deals with them because there's no question, this is life-saving. This is the seed that you need to re-establish it, assuming you're not continuing to damage your cellular energy production, and you can maintain that oxygen rating. Because otherwise, you're just going to continue the same process. But when you have the seed and you're doing that, the combination is miraculous. And then you can optimize that microbiome.

Because once you get Akkermansia back, it stops the competitive inhibition that contributed to the lack of other beneficial strains like Oxalobacter. But if you can optimize your microbiome, like I believe I did and I did something relatively experimental. We're actually in the process of developing IRBs, Institutional Review Boards, to do the experiments and document safety for it. But it is something similar to rectal insufflation of ozone. Instead of ozone we're using CO2.

Sally K. Norton:

Ah, right.

Dr. Joseph Mercola:

The precursor of oxalate, but it's the gas. It's not the crystal. It's the gas. But the CO2 is a highly beneficial nutrient for the obligate anaerobes, and it helps fertilize them and encourage their growth and inhibit the growth of the facultative anaerobes, the pathogenic bacteria.

Sally K. Norton:

That makes sense.

Dr. Joseph Mercola:

Yeah.

Sally K. Norton:

It's like they're plants. They like [inaudible 00:31:03].

Dr. Joseph Mercola:

Exactly. Very similar. Yeah, yeah. You're thinking really sharply despite the personal challenges you're going through, you're right on target. Yes. So, that's the supposition. I think if you could somehow – And this is the answer to the question I posed initially, how on God's Earth could something so magical as two carbon dioxide molecules be so dangerous and damaging? And I proposed the answer to that question is that we aren't making enough cellular energy. We poisoned ourselves with our foods, not intentionally. This is just an artifact of living in the 21st century industrial age that has bastardized and perverted the production of food to the point where it is now toxic molecules that you're eating.

And you have to be an extraordinarily motivated, nearly gifted human being to understand and navigate that pathway, to find and identify and consume healthy food. Because almost no one can do it. Literally, it's that hard. It's that hard because they've ruined the system. And I'm on a crusade to address that. But anyway, that-

Sally K. Norton:

Culturally, everybody's just going along to get along and not really standing up.

Dr. Joseph Mercola:

That's right. They don't get this like you and I do, and there are other people watching this who get it, but it's not an easy challenge. But once you do that, I think that is the answer that explains why this oxalic acid is a problem. Because oxalic acid is actually a supplement. It's food. It's fertilizer for the Oxalobacter, which is a good bacteria. That's not a bad bacteria. That's good. And if you had more-

Sally K. Norton:

You don't necessarily need exogenous sources when you've got a small production [inaudible 00:32:38].

Dr. Joseph Mercola:

Of course. No.

Sally K. Norton:

That would spare the kidneys completely if you weren't eating very much.

Dr. Joseph Mercola:

100%.

Sally K. Norton:

And the liver and the tissues are producing this low level of oxalate to keep the Oxalobacter happy, then the kidneys have made it in a shade. They've arrived in Miami Beach with nothing to do.

Dr. Joseph Mercola:

That's right. Yeah, you've got it. That is a brilliant and contemporary illustration of exactly what I just suggested. So, thank you for providing that. But do you agree with my supposition?

Sally K. Norton:

That the oxalate in the system is helping maintain an appropriate microbiome?

Dr. Joseph Mercola:

Well, no. It's the absence of the ability to produce cellular energy to maintain that gradient, which causes the Oxalobacter to disappear in the first place, which causes the problems with oxalates.

Sally K. Norton:

Well, it's interesting because it just feels like this vicious cycle because one of the major ways that oxalate itself is toxic is it's breaking down cellular production of ATP.

Dr. Joseph Mercola:

Yeah, absolutely.

Sally K. Norton:

It blocks the last step of glycolysis. It blocks Complex II, it causes all this oxidative stress and inflammation that messes up the mitochondria. It's messing up the membranes of the mitochondria in the cell. So, this is one of its mechanisms of harm. And then you have these redundant ways in which the energy production is being destroyed.

Dr. Joseph Mercola:

Yeah. It's a self-perpetuating cycle in the wrong direction.

Sally K. Norton:

Yeah. And unfortunately, the body really tries hard to look like everything's fine. So, this can go on under the hood for decades.

Dr. Joseph Mercola:

It does. It does.

Sally K. Norton:

And then suddenly, in your late 30s or in your 40s, you suddenly feel old and broken.

Dr. Joseph Mercola:

Because you are.

Sally K. Norton:

Because you are. And you already have been for 15, 20, 25 years, and your body's just been playing nice because you have extra capacity in all these redundant systems and the body's doing these metabolic backflips, so you are fine, so you can function, but you're not fine.

Dr. Joseph Mercola:

And I'm reminded of one of our initial conversations in our podcast, we were interviewed together, and you had expressed your observations that those who had engaged in a carnivore [diet] usually had problems. And that makes perfect sense, exactly what you would predict, because the carnivore [diet], by almost definition, you have low carbohydrates, so your cellular energy production goes down even further.

Sally K. Norton:

You can get more insulin resistance and more-

Dr. Joseph Mercola:

100%.

Sally K. Norton:

Low muscle glycogen. And it's just really slowing down, your metabolic rate is like, “Err.” Yeah.

Dr. Joseph Mercola:

Now you get it. You are enlightened for sure. You know this.

Sally K. Norton:

You live stuff and you can see it. I started a full carnivore diet when all the carnivores started inviting me to interview, and I wanted to understand it from the inside. That's how I learned. And so that was April 1st of 2019, and you and I met later that year. And by the next year, I could see my waist thickening. That's not right. And later that year, the muscle cramps at night, the inability to sleep at night and just not feeling great. And that's that carb starvation that you talk about.

Dr. Joseph Mercola:

Yeah. Well, the brain only comprises 2% of the body weight, but consumes 20% of the energy, and it has to have glucose. You will be dead if you have no glucose. You just will be, that's just biology. In literally seconds, you'll go into a hypoglycemic coma, you'll be unconscious and you'll die. Because your brain requires that.

Does lactate help? Of course. Do ketones help? Of course they do. But you need some glucose. So, if you're not eating it, you're going to have to make it. And you'll run out of your glycogen stores within a day or two, and then you have to rely on sacrificing your muscle in gluconeogenesis to make glucose, which is only facilitated by the stress hormones like glucagon, adrenaline and cortisol.

Sally K. Norton:

Yeah. Not a happy life.

Dr. Joseph Mercola:

Which is not good. You don't want elevated levels of those, but they all do. If you stop eating carbohydrates or have radically lowered – For most people, you need at least 150 grams a day of carbs. Anything less than that and you are activating stress hormones because that is the basal that most people need, and some people need a lot more. I'm about 500 grams a day and I've gone up to 600 [grams] before. How many grams of carbs are you taking a day?

Sally K. Norton:

Oh, not enough. Because I'm allergic to the fruits now and all the grains, and it's hard for me to get enough.

Dr. Joseph Mercola:

Okay, so this is the issue. You've heard of Peat before. Of course, you have. Ray Peat?

Sally K. Norton:

Mm-hmm.

Dr. Joseph Mercola:

Yeah, so brilliant [a] guy. I think he was really one of the most brilliant health educators of the last century in my mind.

Sally K. Norton:

He's over everybody's head in a way where it doesn't always [inaudible 00:37:37].

Dr. Joseph Mercola:

He was so far ahead of his time. He was way ahead of his time. He's the first scientist, researcher, teacher that I know of that was discussing the dangers of excess omega-6 before anyone else. He led the field on that, and I missed it. I totally missed it. One of my big clinical mistakes is – I don't blame myself too much because [crosstalk 00:38:07].

Sally K. Norton:

[crosstalk 00:38:07].

Dr. Joseph Mercola:

He did sound smart and he was giving these controversial recommendations. It didn't make any sense. But he was right. He was right.

Sally K. Norton:

Well, same with oxalates. It doesn't make sense on [the] basis of what you think you already know until you know more.

Dr. Joseph Mercola:

Yeah. Until you know more. It's a real deal. And most people, I'm telling you, unless you have an optimized microbiome, and almost everyone watching this does not, you're going to need to pay attention to this. And having low oxalate foods is a good thing. Once you get your microbiome fixed I don't think it's an issue at all. I mean, I'm eating figs now. That's how confident I am. It's not an issue for me. And figs are really high in oxalate, aren't they?

Sally K. Norton:

Not compared to spinach and almonds. They're pretty high, but you can have a whole cup and you're still less than 30 milligrams of oxalate.

Dr. Joseph Mercola:

Okay. I thought they were a lot higher.

Sally K. Norton:

You can handle 200 or 300 milligrams of oxalate a day. The problem is that the really uber high ones, like the buckwheat and the spinach. A spinach smoothie is 1.000 or more.

Dr. Joseph Mercola:

Oh yeah. That's just, that’s just-

Sally K. Norton:

That's a whole different ballpark versus 60 milligrams from your cup of figs.

Dr. Joseph Mercola:

Yeah. I don't think you could ever make an argument to have an excess of more than three almonds a day really. You're in a dangerous-

Sally K. Norton:

And almonds have so any other problematic things. If you want a healthy gut, you don't want nuts kicking your gut over and over again.

Dr. Joseph Mercola:

Yeah, and I used to think macadamia were an exception, and Sally, I don't think they are anymore. I don't think you should have macadamia nuts. Because oleic acid doesn't get a free pass. It has its own problems. It's a MUFA (monounsaturated fatty acid), a mono.

Sally K. Norton:

These seeds from the trees are designed with all these multiple antinutrients to kick you in the gut. All the antinutrients are gut toxic. They're all causing some degree of gut damage. The nuts are just designed to be indigestible. They're designed to dismantle your ability to digest food.

Dr. Joseph Mercola:

Yeah. So, my new recommendation is no seeds, no nuts, none. Zero. Nada. Stay away from those creatures. Have real other foods.

Sally K. Norton:

They're everywhere. They’re everywhere.

Dr. Joseph Mercola:

You know what one of my most favorite foods now is? I think it might help you with your challenges.

Sally K. Norton:

Not butter?

Dr. Joseph Mercola:

Well, butter is a definitely good food, but I maybe have a teaspoon of butter a day, 10 grams. That's about it.

Sally K. Norton:

You poor thing.

Dr. Joseph Mercola:

What? No. Hey, listen, you're looking at someone who had 4 ounces of butter a day in my keto days. I don't think that was healthy either. But I have plenty of fat. I have about 30% fat. I'm not a fatphobic, but I get it mostly from food. I think one of the best possible molecules you can get in your body is the highest quality collagen you can get. Not as a supplement, as a food.

Sally K. Norton:

Pork skin? Fish skin?

Dr. Joseph Mercola:

No. No.

Sally K. Norton:

Fish skin is good.

Dr. Joseph Mercola:

Well, you would know this is going to be a really interesting dialogue because I rarely encounter a highly respected nutritionist like you. You're one of the most respected nutritionists I know.

Sally K. Norton:

Thank you.

Dr. Joseph Mercola:

You are. You've earned it. You've earned it, and you're very, very sharp. This is why I'm enjoying this conversation because most of the time you've got to teach. I just avoid professionals that don't know what they're talking about, so I have to teach them on the podcast. That doesn't work. I like to learn in real-time and I always do with you.

So, collagen. You can get [from] many sources. Any connective tissue. Skin is certainly one. Nails, cow hooves, feet, chicken feet, all sources of collagen. But I don't think they're the ideal form. And this is what I want to dialogue with you about. I think the ideal form is from a joint that has tendons and ligaments. And the biggest joint that I know of – Now you could do fingers.

Sally K. Norton:

That’s fine.

Dr. Joseph Mercola:

How about the knee joint? The knee joint of a cow, otherwise known as a knuckle bone. Have you seen those before?

Sally K. Norton:

Sure. I've been doing bone broth and [inaudible 00:42:04].

Dr. Joseph Mercola:

Okay, good. This is perfect.

Sally K. Norton:

I'm a long veteran of bones and chicken feet. Using pig feet.

Dr. Joseph Mercola:

Okay. So, give me your experience with bone broth creation and the different types?

Sally K. Norton:

Well, usually I would say make sure there's wings and necks if you're doing chicken, you've got to have all those small joints because there's a lot-

Dr. Joseph Mercola:

But I'd be careful about chicken.

Sally K. Norton:

No, I don't do chicken. But in the day, chicken was the first entry-level. This is how you do a broth, throw a chicken in a pot, but add extra wings, extra necks and get enough of that joint tissue. Plus, it's a traditional food in China. Chicken feet are [a] real delicacy because they're delicious. They're so yummy. And so are hocks, pork hocks and pork feet. That's a classic old thing, but you've got to have a joint that's got enough cartilage in it.

Dr. Joseph Mercola:

Do you know of a joint more than a-

Sally K. Norton:

The meniscus in a knee is the thickest layer of cartilage in the body as far as I know. You've got spinal discs and meniscus. Those are the big thick chunks of cartilage.

Dr. Joseph Mercola:

Yeah. So why wouldn't you get it from a cow? That's the biggest animal we consume?

Sally K. Norton:

Right. That's right.

Dr. Joseph Mercola:

Yeah. So, I think that is the finest source of collagen. And as far as I know, you would know, probably better than anyone I personally know, other than a collagen researcher, that that is not commercially available. You cannot buy a knee joint from a cow as a supplement. Do you agree?

Sally K. Norton:

Yeah. Don't know how they make the various gelatins and collagens from beef. I don't know what [crosstalk 00:43:501] using. Yeah.

Dr. Joseph Mercola:

Unless you're buying a bone broth from someone who's making it from that tissue.

Sally K. Norton:

Right.

Dr. Joseph Mercola:

Yeah. That'd be the only way.

Sally K. Norton:

And the local farmers who are selling quarter cows and half cows, a lot of their customers don't want the bones. So, you can get them.

Dr. Joseph Mercola:

Yeah, well that would be – Yes, if you're lucky. And believe me, if you find that person, you've hit the jackpot because in my view, that is one of the healthiest tissues you could consume. Especially in the context of our discussion because collagen is massively crucial for building the integrity of the endothelium of the gut. If you don't have collagen, you're going to get a leaky gut. You need sufficient collagen. You need sufficient collagen-

Sally K. Norton:

Collagen supports brain health too, I believe.

Dr. Joseph Mercola:

Brain health and bone health.

Sally K. Norton:

Of course.

Dr. Joseph Mercola:

Bones are one-third collagen, one-third, one-third collagen. And if you don't have enough of the raw material, how could you possibly have dense bones? It physically is not possible.

Sally K. Norton:

The underlying matrix that makes up a bone is all that collagen.

Dr. Joseph Mercola:

It’s all collagen, it's all collagen.

Sally K. Norton:

Then you build with citric acid and other chelators, you connect all those minerals and make a big [inaudible 00:45:08].

Dr. Joseph Mercola:

And even the muscles, the lining of the muscle, sarcomeres, is collagen. It’s all connected and that collagen converts into tendons in your ligaments. It's all tied together with collagen. It's one-third of the protein in our body.

Sally K. Norton:

I’m not sure we totally understand the full metabolism of that, [inaudible 00:45:28].

Dr. Joseph Mercola:

We don't. It's not known. It's a frontier of science that's not appreciated. And I'm going to push the limit-

Sally K. Norton:

Hydroxyproline is the one that tends to turn into oxalate in the body. And if you're eating a high oxalate diet-

Dr. Joseph Mercola:

No, wait, wait. Walk me through that because how could that possibly be?

Sally K. Norton:

The only true endogenous production of oxalate in the body-

Dr. Joseph Mercola:

Okay, walk me through that.

Sally K. Norton:

-is hydroxyproline gets turned into oxalate.

Dr. Joseph Mercola:

How?

Sally K. Norton:

Well, there's a whole enzymatic pathway. And not all of it, probably 2% of the breakdown of connective tissue, 2% of the hydroxyproline in that is becoming oxalate.

Dr. Joseph Mercola:

So, is it catalyzing a reaction between two CO2 molecules that bind them together? Or is it a degradation product of the metabolism?

Sally K. Norton:

It's from the degradation, breaking this down and trying to get rid of it, it turns into oxalate. I'd have to go back and see if they've characterized it well enough to really know – They know which enzymes are involved.

Dr. Joseph Mercola:

Hydroxyproline is a hydrophilic amino acid. And I've actually written a paper, it's not yet published, on this.

Sally K. Norton:

John Knight, [Ph.D.], is down at the University of Alabama at Birmingham, and he's the real expert in this. He's the one who's done the research on this, and he's saying-

Dr. Joseph Mercola:

For hydroxyproline and oxalate?

Sally K. Norton:

-this production of oxalate is primarily hydroxyproline, some glycine, and that it takes about a scant tablespoon, about 7 grams, of gelatin and collagen to see an elevation in oxalate in the urine.

Dr. Joseph Mercola:

Okay. Now, I'm not disputing that is inaccurate. It probably is. There's no reason-

Sally K. Norton:

Right, but what does it mean in practice? I definitely see it in my clients. If they are doing collagen powders, their arthritis comes back, and then they stop and it [inaudible 00:47:14].

Dr. Joseph Mercola:

That's interesting. I did not realize that. Thank you for that refinement, that precaution.

Sally K. Norton:

So, where do you steer this ship? What's an appropriate way to use these? And that's why I'm quite happy that I eat sardines with skin on because I know I'm getting the collagen.

Dr. Joseph Mercola:

You're not getting much with that.

Sally K. Norton:

It's quite a bit. Skin-

Dr. Joseph Mercola:

Really?

Sally K. Norton:

If you ever cook fish, it's really sticky. It sticks to everything. The skin of fish is very collagenous and it's got that [inaudible 00:47:41] layer.

Dr. Joseph Mercola:

How many grams do you think you're getting?

Sally K. Norton:

We can look it up because I think it's significant.

Dr. Joseph Mercola:

Really?

Sally K. Norton:

And then pork belly with the skin on and making sure you're eating all that connective tissue that has the fat on the meat and those things, you're getting some of that. But with fish, I have to butter the parchment paper and put a little stuff on the skins to get it off to be able to transfer it to the plate because it is so sticky with collagen.

Dr. Joseph Mercola:

I did not know that. That's good to know.

Sally K. Norton:

I think that's another possible alternative. I have developed a beef allergy. No gelatin for me. So that's nice to have that alternative where – Some people use these fish skins-

Dr. Joseph Mercola:

Yeah, you got compromised.

Sally K. Norton:

-as crispies, salmon skin and so on. That's probably a good idea.

Dr. Joseph Mercola:

I'm willing to share but outside the IRB, I might just introduce you to the protocol we have for the CO2 insufflation because I think it's your gut that's the issue.

Sally K. Norton:

I'm sure.

Dr. Joseph Mercola:

If you can get that gut back-

Sally K. Norton:

[crosstalk 00:48:39] excretion of oxalate in the site where all [crosstalk 00:48:41]-

Dr. Joseph Mercola:

You've got a gut problem, 100%.

Sally K. Norton:

100% and yes, let's save the colon.

Dr. Joseph Mercola:

Yeah. So, I'll get you on CO2 and I'll get you the Akkermansia as soon as we get it. I still don't have samples. I've been waiting for samples of this for three months. There are only two companies in the world that produce it. Maybe more, but there's such a big capital investment that it really is a high barrier to entry in this market.

Sally K. Norton:

This is the next level. Very exciting.

Dr. Joseph Mercola:

It's absolutely next level. This is the ultimate probiotic. The global market for this is $100 billion. And as soon as this is introduced, it'll take 70% of the market. There is no reason for another probiotic.

Sally K. Norton:

Wow.

Dr. Joseph Mercola:

Well, maybe.

Sally K. Norton:

Probiotics have performed poorly. A lot of people spend a lot of money.

Dr. Joseph Mercola:

Not Akkermansia. In fact, the one company that's making it, they got approval to treat diabetes and obesity. [The] FDA (Food and Drug Administration) claims they can make it because it worked. How does it work? Because it makes a substance called GLP-1, glucagon-like peptide 1. That is the primary form of glucagon. And what is that? Does that sound familiar? Yeah. There's a GLP-1 analog or mimetic called Wegovy, Ozempic, that they're paying $1,000 a month for that will kill them prematurely. Does it work? Absolutely. But it does it in a way that's like injecting insulin, same thing. You don't want to inject insulin, you want your body to make it.

Sally K. Norton:

That's for sure. And you want your cells to be functional enough to be able to read that insulin and know what to do about it.

Dr. Joseph Mercola:

Absolutely.

Sally K. Norton:

If you've got a lot of acidity and stuff, the shape of those receptors, the last bonding is hydrogen and disulfide bonds. It requires the right pH and the right conditions for those proteins to have the right shape and to work.

Dr. Joseph Mercola:

Yeah, yeah, for sure.

Sally K. Norton:

And so, you're just making sure you're not so inflamed all the time that you're so acidic that those receptors are misshapen.

Dr. Joseph Mercola:

It's really a sad testimony to biology, or probably more of a sad testimony to the perversion of the food system, that someone who's as committed and knowledgeable to health as you still has these problems. That really is shocking. It is shocking. And it is not disparaging in any way. It's just you're a perfect example.

Sally K. Norton:

There's so many of us who've been devoted-

Dr. Joseph Mercola:

It's hard to be smarter – yeah.

Sally K. Norton:

Our whole generation of us in our 60s, there's a whole lot of us who've been devoted to the cause of alternative health and wellness for most of our lives. People I know who've been in the retail side of it, they've done everything right, but they didn't know about oxalates, for example. It turned out that was the huge revelation that if they had known earlier, they'd still have their hips and their knees. But despite doing everything well, not knowing about the oxalates – Again, same with this. We don't understand biology like we think we do. We don't understand how the colon functions. We don't understand the integration of the whole body.

Dr. Joseph Mercola:

Well, the reason we don't is because of the perversion of incentives. Incentives now are based primarily on greed.

Sally K. Norton:

Mercenary.

Dr. Joseph Mercola:

Yeah, it's mercenary. Absolutely mercenary with no intention or desire to really – Other than a few, we're talking well under 5%, maybe 1% of the companies who have any focus or care and attention on the consequence of their business on human health. It almost is non-existent.

Sally K. Norton:

Well, even professors in academia, they have to justify their research saying, "Well, this insight's important because we'll get a drug out of this someday."

Dr. Joseph Mercola:

100%. Yeah. That's just the simplest-

Sally K. Norton:

That's not science.

Dr. Joseph Mercola:

A perversion of incentives. There's no question. But that's the reality.

Sally K. Norton:

Years ago, I was reading about how raw milk defends itself and fights bacteria for three or four days and all this stuff. And when they write about it in the literature they write, "If only we could develop a drug that does what raw milk does."

Dr. Joseph Mercola:

Ultimately, it's really simple. You even referenced this too, and I find it offensive that the two terms for natural medicine, which I think is the most precise and most accurate because it replicates nature's principles. That's not integrative medicine. That's bullshit. That's putting conventional medicine into natural medicine. And it's certainly not functional medicine. Those are two perverted terms that should never be used in my view. It should be natural medicine. That is the truth. We are replicating nature. We're copying it. We're trying to learn from it so we can apply those principles. And when we abide by those principles, biology responds. And it's a pet peeve I have on those terminology.

Sally K. Norton:

Well, humans lack the humility to bow down to nature and say, "Nature, I long to understand you."

Dr. Joseph Mercola:

Yeah, yeah. I couldn't agree more. Yeah, because that's where we learn. It's exactly where we learn. It's a simple thing.

Sally K. Norton:

But we're refusing to do so. We're too full of ourselves.

Dr. Joseph Mercola:

Yeah. It's a hubris. It's hubris. It's hubris.

Sally K. Norton:

It's hubris. It's the kind of hubris it has you run over a cliff by mistake and that's what we're doing.

Dr. Joseph Mercola:

And people do it all the time. But I think it's recoverable. And it's just exacerbated by the effectiveness of the programming and the propaganda and social media and everything that just insulates them from access to the truth. And the censorship doesn't help at all. The sources that do provide the truth are you can't find them because they're not in search engines anymore. So, it's getting worse and worse, but it's not permanent. There is going to be a turnaround.

Sally K. Norton:

It's quite the adventure movie we're living in. There's a few heroes who are going to save the day. Right now things are looking pretty dicey.

Dr. Joseph Mercola:

Yeah, I know, but I know the end. I've seen this movie. I know how it ends. I really have. I live in the future.

Sally K. Norton:

I'm so glad.

Dr. Joseph Mercola:

And I happen to be one of those heroes that saves the day.

Sally K. Norton:

I know. You are.

Dr. Joseph Mercola:

No question. And it's going to happen. And I'm beyond confident. And that's not hubris. That's just [inaudible 00:54:35]

Sally K. Norton:

How nice to have hope in a world that's suffering for a lack thereof.

Dr. Joseph Mercola:

Yeah. The calvary is on the way, folks. I can assure you. We've got this under control. This is not a lost cause. And we're going to provide solutions very, very shortly. We've got lots of good news on the way, so just hang in there and try to do as best you can because help is coming.

But this is part of it, and I really appreciate your refinement of this because I didn't appreciate that. Because collagen, in my view – In fact, I think the ideal food – I'm a big fan of starch now, as opposed to fruit. What are you having for your carbs? Starch?

Sally K. Norton:

No.

Dr. Joseph Mercola:

What do you have for carbs?

Sally K. Norton:

Coconut water and ginger ale. It's like I don't have good options.

Dr. Joseph Mercola:

How about fruit juice? Can you tolerate fruit juices?

Sally K. Norton:

I'm allergic to maybe everything but limes. That's what we have to fix. We have to fix the damaged immune system. When you have the damaged gut, you have this damaged immune system with all these oxygen crystals.

Dr. Joseph Mercola:

100%.

Sally K. Norton:

It can ruin your ability to eat anything. So, if you want a heroic project, let's get it so I can eat again.

Dr. Joseph Mercola:

I accept the challenge.

Sally K. Norton:

I'm hearing.

Dr. Joseph Mercola:

I'm hoping that by the end of this year, before the end of this year, maybe in the fall, I have you on again and we talk about your results.

Sally K. Norton:

Awesome.

Dr. Joseph Mercola:

Because by that time, we'll have our IRB, we'll have collected the data to show the safety to support it. Because otherwise, I can't get sued for this stuff. We have to do legitimate clinical trials, collect the data. And we're going big. I'm collecting a lot of data. I'm collecting a database that's going to be extraordinary that will be a game changer.

Sally K. Norton:

Well, I have some fans who would really love you to save the oxalate lady, so we're with you.

Dr. Joseph Mercola:

Yeah, I agree. Sally, if you're compliant and listening to what I have to share with you, it literally will be very easy. And a relatively small investment. I mean, it is not that expensive at all to do this. All right, we'll do it. We'll get you going. I accept the challenge. This is good.

Sally K. Norton:

It's really good.

Dr. Joseph Mercola:

Yeah. Actually, we're developing a system. I'm going back into clinical medicine again.

Sally K. Norton:

Yeah. Patients are lining up at your door.

Dr. Joseph Mercola:

Well, not to see me. I'm creating a whole system of what I call MHCs, Mercola Health Coaches, that we're training.

Sally K. Norton:

Nice.

Dr. Joseph Mercola:

Yeah, for sure. There's going to be a lot of them. I'm actually developing the training system right now, the educational system. So, they essentially can reproduce exactly the protocols that are in my head and get people better. So that's in process. It probably will be in full impact this fall because we still have to find the coaches, train them, and then develop the beta test. I have to make sure it works.

Sally K. Norton:

That's a lot. But congratulations on getting it this far.

Dr. Joseph Mercola:

Oh, you will be very pleased-

Sally K. Norton:

Oh, good.

Dr. Joseph Mercola:

-when you see this working. And we'll actually be inviting everyone watching this to apply for this position. There's a very specific criteria and there are tests. We don't accept anyone. And maybe one of the four people will be accepted to the training program. And there's no charge for the training program. We just teach them, and it's a paid position, and you have to be able to see 10 people a week. Otherwise, we can't train you. And there's our cost because we've got the best electronic medical system in the world from Athena, so we have to pay for that. Have you heard of Athena before?

Sally K. Norton:

Mm-hmm.

Dr. Joseph Mercola:

Yeah. Did you have experience with it?

Sally K. Norton:

No, not directly.

Dr. Joseph Mercola:

It's a really good one. It really is good.

Sally K. Norton:

Oh good.

Dr. Joseph Mercola:

I think it's the best. It's the most common actually.

Sally K. Norton:

Right. It's a big one.

Dr. Joseph Mercola:

It's the big one. It's a big daddy of the whole industry. So yeah, we're really excited to be collaborating with them.

Sally K. Norton:

That's fantastic.

Dr. Joseph Mercola:

Yeah, it is fantastic. So anyway, I'm going to have to learn how to modulate this collagen. This is a tangent. So, you can't have starch. And this is exactly what Peat would predict. The Peat community, they were initially correct, but they didn't understand the subtleties, the nuance of the microbiome. And they assumed that everyone's microbiome was wrecked, and that's not true. Truly healthy people have a good healthy microbiome and there's a third different animal.

Starch becomes a health food. Once you have a healthy microbiome, starch is your best food. Probably the best one would be Japanese sweet potatoes. But rice works, too. It doesn't have as many of the micronutrients, but it works really well. White rice, not brown. You don't want those antinutrients that you referenced earlier. But when you have a healthy microbiome, that's the way to go. And so, assuming you have a healthy microbiome, rice or Japanese sweet potatoes and bone broth with some egg yolks from a low linoleic acid chicken, I think, is the ideal health food. That's my new definition of health food.

Sally K. Norton:

Sweet potatoes are very high in soluble oxalate.

Dr. Joseph Mercola:

Yeah, but I said the premise here is you have a healthy microbiome.

Sally K. Norton:

Well, and it just depends on – It's always about dose. So, you can have a half cup or a cup, but more than that-

Dr. Joseph Mercola:

I don't know because I haven't played with it, but I'll bet you can go to maybe a gram a day. That would be my guess.

Sally K. Norton:

A gram of oxalate?

Dr. Joseph Mercola:

Yes. Which is a lot.

Sally K. Norton:

It's a lot.

Dr. Joseph Mercola:

I know you're cringing and maybe I'm wrong, but that's my guess. I could certainly be wrong. I have not done a study.

Sally K. Norton:

The thing is you just have to let everybody know, “Look, this is highly individual. Highly.”

Dr. Joseph Mercola:

100%.

Sally K. Norton:

You can't just throw out a gram a day, and that's the universal [inaudible 01:00:26].

Dr. Joseph Mercola:

No, no. That would destroy almost everyone watching us would be destroyed.

Sally K. Norton:

That would be only in the very special situation with certain people, because there's all this variability. It's so amazing, really a stunning museum exhibit in the literature, looking at the primary hyperoxaluria patients because every one of them presents differently and dies in a different state. The same disease, one person is dying with no bones left. They're just a puddle of pain in a wheelchair. And the other person, all their bones and teeth are fine. Completely different outcomes from the same illness. So, there are all these factors like the microbiome and so many others that are uncharacterized, unconsidered, where it's just a big mystery.

Dr. Joseph Mercola:

Yeah. And I'm not suggesting that you could have a gram, 1,000 milligrams of oxalates from unhealthy foods. I would never recommend people eat it. We're in agreement. You shouldn't have seeds or nuts, period. And I'm not a big fan of a lot of the high-oxalate vegetables either, like rhubarb or spinach or those things. I think it's probably not a wise idea. Now maybe if you

cook them really well, that would be okay. Especially if you're cooking them water because oxalates are water-soluble then would it go out anyway, so it'd be a lot less.

Sally K. Norton:

But it's just, when you get [to] a certain level, taking it down by 20% is still meaningless.

Dr. Joseph Mercola:

Okay. Yep. I'm not a big fan of it. I don't eat spinach.

Sally K. Norton:

But like with broccoli, boiling your broccoli is important because that makes a big difference. If you take that down by a third, then it really works great. Yeah. But heat doesn't touch it and all that. People are really confused about cooking. Regular people are so confused about this topic. They're just making up stuff like, "Oh, you didn't eat it raw. You should eat it raw. Oh, you didn't cook it. It should be cooked." They don't understand.

Dr. Joseph Mercola:

Yeah, there's a lot of confusion. You cook it in a pressure cooker. Oh, by the way, speaking of pressure cooker, I think that's the best way to create bone broth. Because as you're familiar with, the most common recommendation is to cook it for 72 hours. Well, that's a nightmare. Who's going to do that?

Sally K. Norton:

I did it all the time. Just put it on the counter.

Dr. Joseph Mercola:

I know. When I first encountered [Dr.] Natasha Campbell-McBride's book, what's that? I wouldn't do it. It just takes too much time. So, I abandoned it. But then I realized once I got a pressure cooker, I [can] cook in a pressure cooker. It's four hours.

Sally K. Norton:

It's a lot of heat. I'm always afraid of really hot, incinerating heat.

Dr. Joseph Mercola:

Yeah. But a pressure cooker is safe as can be.

Sally K. Norton:

Because the heat is less hot?

Dr. Joseph Mercola:

No, it's contained in a pot and it's got internal safeguards that prevent it from overheating.

Sally K. Norton:

Well, the whole point of pressure-cooking is that you're cooking at a higher temperature. That's what you're doing. That's why it works.

Dr. Joseph Mercola:

No, no, that's not true. You're cooking at the same temperature. You can't go above 212 [degrees F] with the temperature of water, right? But the pressure – Because there are two variables, temperature and pressure. It's the high pressure that does the magic. It's significant. I don't know how many atmospheres of pressure it is, but it's a lot. I mean, you can't open up a lid on a pressure cooker. It will not open because there's so much pressure in there. So, it's the combination of the pressure and the heat. And that heat is converted because the water is an interesting molecule. You know there are four states of water. You know what those states are?

Sally K. Norton:

Liquid, gas, frozen. And there's an in-between state.

Dr. Joseph Mercola:

Yeah, do you know what it is?

Sally K. Norton:

Is it between frozen and liquid? Between frozen and gas? Between gas and frozen-

Dr. Joseph Mercola:

I'll give you a hint. Think collagen, what would that state be? It's called-

Sally K. Norton:

Oh, it's a gel.

Dr. Joseph Mercola:

Right. That's it. You got it. I knew you had it. It's gel water.

Sally K. Norton:

Gel water, yeah.

Dr. Joseph Mercola:

That's the fourth phase of water.

Sally K. Norton:

A structure of water.

Dr. Joseph Mercola:

That's the fourth state of water. It's got a different molecular formula. Instead of H2O, it's H302. And it has a different chemical structure. It lines up structurally like a beehive, it's in hexagons, it has different physical characteristics, like a dozen different – So, it's a distinctly different state of water.

Sally K. Norton:

We need to know more about water.

Dr. Joseph Mercola:

Well, we do already know a lot. And actually, I've got almost a Nobel Prize discovery about gel water and how it's created.

Sally K. Norton:

Oh cool.

Dr. Joseph Mercola:

And how it's connected to collagen. I've connected the dots together because the range of structured water – The other term of it is structured water. And [Gerald] Pollack is one of the biggest researchers on it. And he identifies it as EZ water, which means exclusion zone, which is a foolish mistake on his part. And I would tell it to his face because there's no reason to call it – He just created this name that doesn't mean anything. It should be gel water. That's the most accurate way. Anyone can remember gel water. That's what it looks like. You see it. It's a gel. If you've seen gelatin or jello, that's what it's, that's structured water.

Sally K. Norton:

That's interesting because really the matrix of living tissue is gel.

Dr. Joseph Mercola:

That's right.

Sally K. Norton:

It absolutely is.

Dr. Joseph Mercola:

Absolutely. And it's interesting because gel water, one of its physical characteristics, is a storage of energy. You can create an electrical gradient. It's a battery. And actually, there's this trend. The way that you can convert sunlight to energy in your body is through gel water, structured water.

I haven't figured out the specific details yet. I'd have to still do some more investigation on it. But somehow those hydrogen ions make it to the inner mitochondrial membrane. And they increase the electromotive force, which spins out complex fiber, ATP synthase, and increases the cellular energy production. And it does it through gel water. And the range of gel water in the body is like from 3% to 70%. When you're at 3%, you're close to death.

Sally K. Norton:

3%?

Dr. Joseph Mercola:

3%. Some people believe you can still be alive at 3%.

Sally K. Norton:

Wow. Wouldn't you be disintegrating electromagnetic – how does a body communicate with itself?

Dr. Joseph Mercola:

I know, you're close to death, as I said. But in many ways you would appreciate this analogy. It's very similar to glycogen. And in what way? Well, glycogen is a storage of energy, right? It's [a] glucose polymer. And when you don't have enough and you have a surplus, you store the glucose as glycogen in your liver, but also your muscles. But your muscle glycogen does not go and support your brain. It's just used for your muscles.

So similarly, when you have this surplus of energy introduced in the water into your body, it's stored as gel water, which can last – I don't know how long it lasts because we don't have the technology to measure structured water in the body yet. I'll probably facilitate in inventing that in the near future. But it is-

Sally K. Norton:

Well, Jim [inaudible 01:07:23] talks about the whole matrix of these hydrated basically strings of amino acids, where this is where electrons and electron information is traveling through the whole body in one giant knowing matrix.

Dr. Joseph Mercola:

Well, that's a different setup. I'm just looking at-

Sally K. Norton:

But it's similar, it’s all embedded in this gel water as part of what keeps the whole matrices of the cells.

Dr. Joseph Mercola:

It could be – Yeah. Do you have any studies on that or any references?

Sally K. Norton:

Well, Jim was the one who did a lot of that work initially. He's still around.

Dr. Joseph Mercola:

Okay. So, we've got a barter. I'm going to facilitate the rehabilitation of your gut and you're going to give me that study.

Sally K. Norton:

I'll look through Jim's stuff. I'll see if I can find it for you.

Dr. Joseph Mercola:

All right. Once you find it, I'll give you the protocol.

Sally K. Norton:

Oh, dear. Now I’ll go find it.

Dr. Joseph Mercola:

On condition. No, it's not on condition. No, I'm just kidding. I'll still help you, but I would really like that paper because I haven't figured out that part.

Sally K. Norton:

Jim's work was really – It’s not getting the respect it needs-

Dr. Joseph Mercola:

Yeah, I haven’t heard of it before.

Sally K. Norton:

-but it's really important to understand this whole electromagnetic life, the whole wholeness of an organism.

Dr. Joseph Mercola:

There is an electrical gradient in gel water, and it stores energy. It's a battery.

Sally K. Norton:

That is so cool.

Dr. Joseph Mercola:

And that energy, those hydrogen ions can be transferred into the mitochondria where they're used to create ATP. It's not a glycolysis. It's in the electron transport chain is where it happens. Or specifically, in [the] inner mitochondrial membrane, which [is] Complex V.

That's an interesting tangent. Not much related to it, but collagen is essential. I don't think you could be often healthy if you don't have collagen. I think it's one of the reasons why most carnivore people do so poorly. Because if you're like a Paul Saladino advocate, who strongly advocates nose-to-tail, then you get away with [it] because you're eating collagen. There's no way to eat nose-to-tail unless you're eating collagen. That's healthy. That's okay. That will work. Because one-third of your protein should be collagen. No doubt in my mind. And when you go below one-third, you run into problems. You absolutely run into problems. Very serious problems.

And sometimes, you don't have a choice like in your case. You're between a rock and a hard place because of [a] compromised microbiome. You'll be one of the first people I give the Akkermansia samples to, just as a test. You probably only need one or two capsules, I think. You don't need many. But it's a seed. The companies that measure this, the microbiome test, I'm actually purchasing some of the equipment because they're too expensive. They charge $500 for a test and we're going to try to sell it for $50. Because you only need to measure a few keystone species. But I looked at their data and one out of three people, one out of three people, Sally, we have undetectable levels of Akkermansia. Undetectable.

Sally K. Norton:

[inaudible 01:10:13].

Dr. Joseph Mercola:

And it's supposed to be 10% of your microbiome should be Akkermansia, 10%. And it's down to zero. That's just the extreme. How many people have only 1%? I don't know.

Sally K. Norton:

How would any form of health care without this have any hope of real success?

Dr. Joseph Mercola:

It would have [to be] close to zero. You can't. We've both agreed upon the microbiome as probably the single most important target to optimize if you want to be healthy, because there's a lot more of them than us, and they make all these beneficial things. The ones that we know-

Sally K. Norton:

If we can figure out what optimum is. But you're focusing on one key and fairly simple-

Dr. Joseph Mercola:

No, no. The strategy here is-

Sally K. Norton:

-element. That's the lever versus worrying about hundreds of thousands of bacteria.

Dr. Joseph Mercola:

Because if you can get those guys to grow, the other ones grow too. It's not just of Akkermansia, there are dozens of others.

Sally K. Norton:

Yeah, right. You have to have that – What do you call that? Pioneer species for everything else to work.

Dr. Joseph Mercola:

Yeah. Keystone. Keystone species.

Sally K. Norton:

Yeah, that's the word.

Dr. Joseph Mercola:

Yeah. And that's one of them. A keystone refers to an arch and there's this one central place in an arch that supports it. And if you don't have that, the thing collapses. And Akkermansia is like that. It really is the most important, but it doesn't diminish the significance of the other supporting species, like Clostridium and many others, Bifido.

Sally K. Norton:

[inaudible 01:11:33] is interactive and [inaudible 01:11:35] because-

Dr. Joseph Mercola:

We don’t have a clue what's going on.

Sally K. Norton:

What you're eating and what the state of your physiology is constantly changing. And so, that has to be able to-

Dr. Joseph Mercola:

And that's thing though, because what you're eating and what you can't eat because your biology won't let you, and what you can't eat is really the fuel you need to be optimally healthy, but you can't eat it because your microbiome is not balanced. It's not optimized. So, you're between a rock and a hard place and you cannot get healthy, which is where you are at right now. That's exactly your position, and that's really shocking. So, I'm personally looking forward to seeing you back to health this year.

Sally K. Norton:

I'm with you on that one.

Dr. Joseph Mercola:

Yeah. It should be really easy because you're doing almost everything else right. You're almost ideally optimal.

Sally K. Norton:

I'm feeling better than I felt my entire adulthood. I'm finally able to tolerate weight training. I had all these bad tendons my whole life that wouldn't tolerate heavy weight training or that kind of thing. I can do that now. So many things have come back.

Dr. Joseph Mercola:

Yeah. Good, good, good.

Sally K. Norton:

It's great to be 18 again in a better time.

Dr. Joseph Mercola:

Well, I've actually turned the clock backward. I think my biological age is below 30. And I'm 70 chronologically. I embrace and enjoy that. I've actually gotten my body fat down to your levels or close to them, I think.

Sally K. Norton:

Yeah. So, you know the old joke about if you could just be young when you're old, because when you're young you're foolish. And now with 70 decades, there's so much wisdom to be had to really enjoy a healthy body.

Dr. Joseph Mercola:

Yeah. But you can authentically, sincerely, biologically turn back the clock. You absolutely can.

Sally K. Norton:

You can. Absolutely.

Dr. Joseph Mercola:

Not a micro-doubt in my [mind], and I've done it and I'm going to teach people how to do it.

Sally K. Norton:

Because you're designed for that. Your biology is reaching for the best of life. Every day it's working towards that.

Dr. Joseph Mercola:

It's impossible to get there unless you take extraordinary efforts because there's so much propaganda and artifacts of institutions that are committed to greed that you cannot navigate the minefield. You just go one step here and you're boom, you're blown up because you didn't understand what the damage to your biology is from what they did. It's hit as hell.

Sally K. Norton:

Well, it's well-meaning and it comes through well-intended people.

Dr. Joseph Mercola:

Well, not all the time. Frequently not.

Sally K. Norton:

With basically [a] functional medicine guy who's living on IVs (intravenous) and blowing out your microbiome with heavy use of antibiotics to try to fix your gut. That's a standard thing.

Dr. Joseph Mercola:

There are probably less than a handful of doctors in the country that I would trust to treat me. I mean a handful. That is less than five that I would trust. And I'm not saying there's [no] more out there. That [who] I know personally, and I know a lot of physicians. I think most of them do not know what they're doing. And that may seem haughty and arrogant, but that's what I believe. And I'm entitled to that belief.

And I'm not going to say, "Okay, I'm better than you." No, I'm offering to train these people and give them the protocol so they understand it because we need this information spread out there and identify what the landmines are that people are encountering.

Now, they may have skills to navigate people through [the] ICU (intensive care unit) that I don't, because that's not my forte and focus, and to rescue people from the throes of death when they've been assaulted for decades because they haven't addressed the fundamental basics. So, that's not my specialty at all. But I know how, if a person still has a few months to live, we can reverse most diseases. And I don't care what the name is, because they're all derivatives of the same thing. You're just giving labels to them.

Sally K. Norton:

Low cell energy.

Dr. Joseph Mercola:

Right. A loss of cellular energy production. You give the energy back and everything corrects.

Sally K. Norton:

And then everything can work.

Dr. Joseph Mercola:

Everything works. You get it. It's just such a pleasure to discuss with you.

Sally K. Norton:

It’s so simple.

Dr. Joseph Mercola:

Yeah, it's fundamentally basic.

Sally K. Norton:

You don't need 15,000 diagnoses. You don't need all that.

Dr. Joseph Mercola:

You don't need it. That's why I've designed that clinic intake form for our, we call them guests, but the people that we're going to take care of and help them resolve their illnesses. And it's got 120 questions or so. We get a list of what they've been diagnosed with, but there's no focus. We're not going to diagnose them with Lyme or do this advanced microbiome test and say, “Oh, you've got all these 15 infections.” No, it doesn't matter. We just have to give your body the basics and it self-corrects. I don't need to give you a label.

Sally K. Norton:

100%.

Dr. Joseph Mercola:

Yeah, that's it. That's it. And there are not many physicians who will take that position. And I'm sure your experience will support that.

Sally K. Norton:

Oh no. We dazzle them with diagnoses. We're proud of our ability to spew out Latin names.

Dr. Joseph Mercola:

Oh yeah. Because they were brainwashed just like I was.

Sally K. Norton:

Yeah, that's how you know you're a fancy person because you can spew out all these Latin names for things.

Dr. Joseph Mercola:

Yeah. And not to disparage it. Sometimes it's helpful because there can be symptomatic reliefs, but it doesn't address the fundamental problems.

Sally K. Norton:

Right. It becomes more of a distraction.

Dr. Joseph Mercola:

All right, well I knew this was going to be a very delightful conversation and indeed it has been. And some good things are going to come up. We're going to get you back and healthy again so that you can share this with other people. And you'll be one of the testimonials we can use for our program to inspire people. And all the others that you're taking care of, the thousands, tens of thousands, I don't know how many people you've impacted, but you've impacted a lot. You're a legend in the field. And to contribute greatly and-

Sally K. Norton:

Thank you.

Dr. Joseph Mercola:

-you've really studied, and you know your stuff really well. As I said, you're an anomaly. Not many people have your knowledge and your common sense and your wisdom you have acquired, and I was hoping we wouldn't get into a debate about this and we weren't. It couldn't have been better because it's just a sharing of knowledge. This is the way professionals should dial on.

Sally K. Norton:

It's a special day and I feel like it’s day one of something special.

Dr. Joseph Mercola:

Yeah, it is. It is.

Sally K. Norton:

Thank you.

Dr. Joseph Mercola:

Yeah. So, we'll get you back. When we last talked, I didn't know this. I'm learning continuously and evolving my understanding of biology.

Sally K. Norton:

Well, we all need to be. If we're not learning, then we don't know what we're doing.

Dr. Joseph Mercola:

Yeah. But it's cool, once you get it – See, the beautiful thing about this, Sally, once you have enough cellular energy, there's another thing, it kind of refers to the love, because you're actually able, once you have energy, you can evolve into your intuition and your gut feeling, and connecting to this larger source and wealth of knowledge, which is outside your mind.

Sally K. Norton:

Right. I think intuition lands very well in us mature people.

Dr. Joseph Mercola:

Yeah. So, that's the benefit of that. All right. Well, any closing-

Sally K. Norton:

[inaudible 01:18:36]

Dr. Joseph Mercola:

We should probably say the names of your book and your website and everything because we haven't even done that. You are the resource for oxalates, and we didn't hardly talk about them. You shared your bits of wisdom, but I just wanted to go to a different area today.

Sally K. Norton:

That's really refreshing for me because saying the same stuff over and over again – They can hear me in 200 other places talking about oxalates so we don't have to repeat it here. There's lots of free stuff on my website, which is sallyknorton.com. And I-

Dr. Joseph Mercola:

Tell the "K" is important.

Sally K. Norton:

The K. The K is important.

Dr. Joseph Mercola:

Not with a period and you won't get there.

Sally K. Norton:

Not with a period, sallyknorton[.com]. When I was looking for the URL, sallynorton[.com] was taken. So, [the] "K" matters a lot to find the right person because Sally Norton is like Joe Smith. It's not an unusual name. But I have condensed down gobs and gobs of science and made it as simple as I could, but as complete as I could. So, if you have clinical thinking in your head, if you have any knowledge about health, you can really get a deeper value out of this. But people read this in two days.

And then there's a lot more coming. But if people who want more data and more understanding – The misunderstanding, the misapplication of data, people think there's one number for something and the one we have is exactly it, and it has something to do with the one you just bought and put on your plate. No, no, no. So, we try to explain wiser thinking about how to use data in here too, to up your data intelligence quotient.

Dr. Joseph Mercola:

Yeah, there you go.

Sally K. Norton:

And I have a little YouTube channel if people want to hear stories from people and want to have little bits of [crosstalk 01:20:12].

Dr. Joseph Mercola:

What's your YouTube channel?

Sally K. Norton:

It's Sally K Norton.

Dr. Joseph Mercola:

Okay, good. Perfect. And the backstory of your book is you invited me to write the foreword to your book, and before I got to write it, your publisher said, "Oh no. That's the No. 1 spreader of COVID misinformation. He cannot be in this book. He's out."

Sally K. Norton:

Controversial topics need to march alone.

Dr. Joseph Mercola:

But didn't you invite me to write it for the next book? I can't remember?

Sally K. Norton:

Yeah, well, you were already recognizing the value of this so much. You were like, “I would write a book if I could, but you need to write the book and let me do your foreword.” You are your normal, enthusiastic self when you recognize important topics.

Dr. Joseph Mercola:

I'm an early adopter for sure in most things.

Sally K. Norton:

Well, I'm glad I was there to catch your enthusiasm.

Dr. Joseph Mercola:

Yeah, yeah. Well, you're doing a good service because most people watching this will benefit from the material. Because until you optimize your microbiome, you have to pay – Well, you would benefit from paying attention to oxalates.

Sally K. Norton:

No doubt.

Dr. Joseph Mercola:

Because you're going to suffer otherwise. You will definitely suffer.

Sally K. Norton:

If you want to be fertile and not mess up your sperm, you got to watch this. If you want to have healthy children and not have crabby intolerant children who can't learn or [are] full of cradle cap and stuff, you shouldn't be poisoning them with too many sweet potatoes and the almonds and peanut butter and potatoes.

Dr. Joseph Mercola:

Yeah. Potatoes can be healthy and you can have them once your microbiome is fixed. Not before that.

Sally K. Norton:

That'd be interesting because that's a whole other subject we probably shouldn't even bite on. But there are whole populations that seem to not tolerate the alkaloids and things in potatoes. A lot of the North American Natives don't develop-

Dr. Joseph Mercola:

Interesting, but a topic for another discussion. One of the things you can trust, if healthy indigenous people that have not been exposed to what I call not Western diet, but more accurately is industrialized food, if they're basically eating indigenous food that's been prepared

the way their ancient ancestors did and they have a problem with the food, I would pay attention to that. I would definitely pay serious attention to that because there's probably something that's impacting biology adversely on that. That is something I would trust for sure. I wouldn't ignore. I would not ignore. A lot of things I ignore, but that would not be one of them. Okay. All right. It's been a pleasure.

Sally K. Norton:

Very much so.

Dr. Joseph Mercola:

We'll connect and get you optimized again.

Sally K. Norton:

Wow. Appreciate that.