

Jonathan: Welcome everyone. Jonathan Hunsaker here with Organixx, and this is our very first podcast, joined today by Organixx CEO TeriAnn Trevenen.

TeriAnn: Hi, everyone.

Jonathan: And also, our good friend Dr. Dan Nuzum. And we're just going to do a whole series here where we're going to educate you more about supplements, how to live a healthy lifestyle, and really, just pick Doc Nuzum's brain and get all the good stuff out of it for all of us to enjoy and learn from.

TeriAnn: Yeah, we're excited to have Dr. Daniel Nuzum here today.

And just a little bit about him. He's the youngest licensed naturopathic physician. He was licensed at 20 years old. He is a Doctor of Oriental Medicine. He has a PhD in osteopathic clinical sciences. He's been practicing for 22 years. He lives and practices in Idaho with his beautiful wife and five children, and he is a walking encyclopedia for health. He has a wealth of knowledge and information, and we're excited to have him here today.

So, today, we're going to talk a little bit about the supplement industry. We're going to talk about important information around supplements and what that looks like. We want to educate people more around supplements and information that can help you make more informed decisions.

And so, we're excited to be having this conversation today and learning more. Let's talk a little bit about the history of supplements and what that looks like. I mean what's our first knowledge of supplements?

Dr. Nuzum: Historically, if we go back, as far as written records, the first group on the planet to actually manufacture herbal remedies, where they actually had a standardized—they picked the herbs, they dried the herbs, they prepared the herbs, they extracted things, they made a specific product from the—a specific remedy from the herbs, and then distributed it, were the Chinese. That's about 4,000 years ago, okay?

So, this is an old practice actually. But their practice was to make kind of like a porridge out of their herbal concoction, and then they would take and mix that with honey, and they'd take and make little dots on paper with the honey and then roll those dots, and they would call them tea balls. They were tiny little tea balls.

So, if you took a standard capsule today that any of our supplements would be in, or any—you find most across the supplement industry right now, you could probably fit 20-30 of those little tea balls in one capsule.

TeriAnn: Wow. They're tiny.

Dr. Nuzum: Tiny, tiny little dots. And originally, that was made for the Emperor and his family, the Emperor of China and his family, and then later on, they started doing the same thing for the dignitaries of China, and that was a big thing. And it's actually still a practice today in all through the Orient. You go into—you can even get them here in the states, you get Chinese herbal remedies that come in little tea balls.

TeriAnn: Wow.

Dr. Nuzum: That's a 4,000-year-old practice.

Jonathan: And yet, we call it alternative medicine, right? The alternative medicine that's been around for 4,000 years.

Dr. Nuzum: Exactly.

Jonathan: As opposed to what goes on now with allopathic medicine.

Dr. Nuzum: Exactly. Isn't that crazy?

TeriAnn: How are people taking these tea balls? Do they just ingest them? Do they mix them in water?

Dr. Nuzum: Both. They would take and put them in hot water and drink it like a tea, or they'd take and just—

Jonathan: Swallow them.

TeriAnn: Yeah, the tea would make the most sense to me. That's why I asked. I mean that's—yeah, definitely interesting.

Jonathan: So, how's it evolved throughout the years? I mean how has it changed from being these—

Dr. Nuzum: If we move forward in history, so that's—that whole practice started about 4,000 years ago, we move forward, historically, if you read through history, you find a certain person was traveling around x-y-z spice trade route, or Marco Polo would come up in the Middle Ages, right? Marco Polo went on his epic journey to China and to Japan, the whole Orient, right? He went there via spice trade routes.

Well, the spices that they were trading were herbal medicines. Those are things—yes, they were cinnamon and ginger and cloves and cayenne pepper, and that kind of thing. They were spices for sure that they were—paprika, and all kinds of stuff like that. They would bring into Europe, or they would take things from Europe and send it over to China also. They were trade routes.

Jonathan: But it wasn't just for cooking, right?

Dr. Nuzum: It wasn't just for cooking. Exactly.

Jonathan: There was reasons for having all of these different herbs or spices, right?

Dr. Nuzum: Exactly. And it wasn't—they weren't just culinary. These were things that they were—they would bring to the apothecary, and the apothecary would take and make medicines out of those “spices.” And this isn't a recent history, this is thousands of years of history that's been going on.

TeriAnn: Were they a luxury at that time or were they something that were widely available for everyone to use? What did that look like?

Dr. Nuzum: It was certain things were available, other things were more expensive, and so, were a luxury. Things like—the reason that ginger is still so common and so widely-used today is because of that—that was a versatile spice that could grow in different climates. But it all comes from the Orient actually.

And so, that's something they would grow in Spain, they'd grow in Morocco, and they'd grow—they could get it to grow all through the Middle East and things like that, if they watered it. And so, that's just one example. Cinnamon's another one. But then you have things like the herb thyme, which is a European herb that's been used in Chinese herbal medicine for about 2,000 years. But it doesn't—it's not native to China. They've been using it there because of those trade routes is what I'm getting at.

So, over our history, we've had, even if you move forward today, a lot of your highways through middle Asia, and through—would connect Europe and China, they're old paved highways, highways that were, at one time, old trade routes.

TeriAnn: So, there's a lot of history there.

Dr. Nuzum: There's a lot of history. Now all of that, all that trade was based on—it was medicine. These herbal medicines were “the” medicine. And so, the folks in Europe wanted the stuff that the folks in China had, the folks in China wanted the stuff—

Here's an interesting—there's an herb called rhodiola. It's an adaptogen, one of my favorite herbs. That grows up in—it's native to Russia, but the Emperor of China would send an envoy to the czar of Russia every year with millions of dollars' worth of gold to get his year's supply of rhodiola from the czar of Russia.

TeriAnn: Wow.

Dr. Nuzum: And so, there's—my point is herbal medicine has been “the” medicine for thousands of years.

TeriAnn: Well, and it seems like then, no pun intended, they were worth their weight in gold. I mean people were paying high amounts of money to—

Dr. Nuzum: Oh, yeah.

TeriAnn: —to obtain these herbs, because they knew what they could do for them.

Dr. Nuzum: Right.

TeriAnn: Which is really fascinating. So, let's talk about that then, for those trade routes, how did we get into America and having herbs here in America?

Dr. Nuzum: Christopher Columbus was looking for a new trade route for one of the European trading companies that—the trade route he was looking—what they were looking to trade was spices and sugar. So, he bumped into America on the way, and discovered our continent. But he was just looking for a faster way to get to the East and just happened to run into Cuba, I think is what it was.

But literally, he was not searching for our continent. He was looking just for another, quicker route to the Orient so they could trade these spices. And the idea was—the reason for that was they wanted to get the spices back to Europe in a fresher state. That was why they were looking for a faster route.

Jonathan: So, let's fast-forward even a little bit more, up to just the last 100 years, 150 years. And maybe it's a little older than that. But how has it changed into the supplement industry now? Back from just being herbs and spices and things that were traded, mostly probably in their raw form, to starting to develop into capsules and pills and things like that.

Dr. Nuzum: Sure. In the United States, about the late 1700s, there was a group of—a medical group that got together. They called themselves The Eclectics. The Eclectics would be very much like modern naturopaths. They used everything available. And that would include—they used what would have been pharmaceuticals in their day. They used some surgery. They used all kinds of things. But their main remedies were herbal remedies.

So, this goes back, we're talking close to 250 years. And their medical system survived until about the 1950s. And you take things like—well, let me just back up real quick. A little more information on them. They did a lot of work with the Native Americans, and they preserved a lot of the Native American herbal remedies that the tribes had been using for years and years and years. One of those remedies, a real popular remedy even today, called the essiac formula. You've probably heard of that. That's—

TeriAnn: Essiac tea.

Dr. Nuzum: Essiac tea, right?

TeriAnn: Yeah, absolutely.

Dr. Nuzum: So, the essiac tea is from Manitoba. It's a Canadian Native American remedy, First People's remedy. That goes back they don't even know how long. The tribes in that area have been consuming that tea for forever. None of them ever had cancer, diabetes, or heart disease, or anything like that.

And finally, there was—it was an Eclectic doctor that was working with them, preserved that formula, and his nurse, whose name was Cassie, was the one that kept his product going. He made an actual herbal extract out of it that they could add to tea, or you could make the same process that the tribe did and make a tea in your kitchen. But they actually bagged the raw herbs and collected them and made a product that people could purchase. That was back in the early 1900s.

That particular remedy came under fire from the FDA and the American Medical Association back in the 30s. And so, Nurse Cassie changed the name of the formula to the Essiac formula. And essiac is her last name spelt backwards.

TeriAnn: Wow, wow. I had no idea. That's fascinating. And so, do you—so what—at that point when they did that, and they started coming under fire, do you think that changed the way that people were doing things and how that affected the supplement industry moving forward?

Dr. Nuzum: Yes, very, very much. The supplement industry as we know it today actually emerged out of the pharmaceutical industry toward the end of the 1800s, the beginning of the 1900s. It was back—if we go back during that time, about 70 percent of the US pharmacopeia, the accepted pharmaceuticals that pharmacies would dispense, all your drugstores across the country would dispense, about 70 percent of what they dispensed was cannabis in some form or another. That was the major remedy in the pharmaceutical.

Jonathan: Cannabis or cocaine, right?

Dr. Nuzum: Right, right. Cannabis, cocaine, heroin. Those were—

Jonathan: Good stuff.

Dr. Nuzum: It was.

TeriAnn: All controversial topics now, too.

Dr. Nuzum: Exactly. But those were—100-120-130 years ago, those were the primary remedies. The other 30 percent of pharmaceuticals, you had things like mercury, which is still a remedy. They're still using mercury as an anti-microbial. Another remedy they would use was iodine. Iodine was the most prescribed pharmaceutical or "drug" up until probably the early 1950s.

Jonathan: Prescribed just to use topically or to use orally as well?

Dr. Nuzum: Internally.

Jonathan: Got it.

Dr. Nuzum: Oh yeah, it was—that was in every doctor's bag. Every doctor carried and used iodine, and they prescribed it, prescribed it, prescribed it. They used it for everything, you know?

We go through and we talk about, okay, so back at the turn of the 20th century, they had cannabis, your heroin, cocaine. Mercury was a remedy, iodine was a remedy. But about 20 percent of pharmaceuticals were your old herbal remedies, still from that Eclectic medical group.

And we get up to the—about the first World War, and the time of the Flexner Report, when that came out. The Flexner Report pretty much stopped all federal funding of any medical institution that wasn't pharmaceutical and surgical-based. So, if they were teaching anything other than surgery and pharmaceutical drugs, they pretty much got—

Jonathan: Well, I mean it really ended the homeopathic movement, right?

Dr. Nuzum: Absolutely.

Jonathan: So, can you talk a little bit about that? I mean homeopathy and how that was what was taught in schools, that that's what most of the medical schools were until the Flexner Report came out and they shut all that down.

TeriAnn: Well, and another thing that you touched on, too, just to be clear, you talk about 70 percent was cannabis that was being dispensed, and you talk about 30 percent was pharmaceutical. But that was 20 percent herbal, 10 percent what we would typically call pharmaceutical today?

Dr. Nuzum: Correct.

TeriAnn: And about how many pharmaceutical products do you think were offered at that time?

Dr. Nuzum: Oh, man, less than a— *[audio trails off 0:16:26.6]* Maybe 50-60 products at that time.

TeriAnn: Yeah? And so, before you touch on the homeopathy, I think that's a really fascinating point, that some of these things were just easily available to people, they could go and get these things, and now, the tables have turned. I think in the industry a lot, you see 80 percent pharmaceutical and people taking 20 percent herbal.

Dr. Nuzum: Oh, absolutely.

TeriAnn: Isn't that fascinating?

Dr. Nuzum: Yeah.

TeriAnn: And if things like cannabis are so heavily regulated now, we don't need to go too far down this rabbit hole, but if things like cannabis are so heavily regulated, they're regulating our health through pharmaceuticals, what does that look like for the herbal supplements and industry? There's a lot of controversy around that, and I think negative light shed on herbal supplements and what they can do for you. But really, if you just go back to the 1930s, which really wasn't that long ago, that's what people used, was not pharmaceuticals.

Dr. Nuzum: Right. It was—the idea of building your health was still a medical—it was still taught in most branches, almost all branches of medicine. You had to do something to make yourself stronger, you needed to do something to make yourself healthy.

Jonathan: It wasn't just what you could take was going to fix everything.

Dr. Nuzum: Right.

Jonathan: It was a more holistic overall approach to your lifestyle, right?

Dr. Nuzum: Sure, absolutely.

Jonathan: You can't just keep being a couch potato and eating crap and just take a couple of these pills and that will fix you.

Dr. Nuzum: Absolutely. Doctors still told people to exercise, drink more water. All these basic things were still medical practice back then. Even in the Western medical side of things, they were still doing a lot of that. They were, I guess, more “wellness” based back then. And so, as the Flexner Report came out, the—we lost, at that point, I forget how many, it was like 40 or 50 different alternative, what we would call alternative medicine institutions.

TeriAnn: Wow.

Dr. Nuzum: There were, I think there were 17 naturopathic medical schools at that point, and within five years, there were only two.

TeriAnn: Wow.

Dr. Nuzum: Similar thing happened in the osteopathic community, similar thing in the chiropractic community. The Cleveland Clinic, in Cleveland, Ohio, was originally a homeopathic university and hospital. It was a homeopathic facility. And today, you can't even dare use the term homeopathy. The facility today, it's so far from where it originated.

But in the supplement industry, what we have as an industry, as the pharmaceutical, with the Flexner Report, not only did they do—they cut a lot of the funding for the universities, funding for anything that wasn't pharmaceutical also got cut.

So, they didn't fund any of the herbal remedies anymore. And at that time, they also started to demonize things like cannabis and your other remedies that weren't standard chemical drugs. So, pharmaceuticals, the pharmaceutical companies threw what we would call supplements out the door.

Jonathan: Well, I mean the pharmaceutical companies essentially, they were donating money to the schools under the premise that somebody from the pharmaceutical company not only needed to be on the board of directors of that school.

And so, the more money that they put into the school and the more people they had on the board, the more influence they had over everything. And so, they were able to slowly push out what was standard medicine, that we now call alternative medicine, but the standard practices to help push more of their pharmaceutical drugs as the only solution.

Dr. Nuzum: Correct.

Jonathan: And when you were talking about, I mean back then, we talked about it being an overall wellness approach from doctors, even in the Western world. It's like it's interesting now, you go see a doctor, and how much do they talk about diet? How much do they talk about exercise? How much—are they really touching on that versus “This is the pill that you take? Or this is the pill.”

And you have to wonder, I mean how much over the last 90 years since the Flexner Report, how much has changed there in the medical books to just continue to remove things that help you heal naturally, like exercise, like good sleep, like eating healthy, eating—all these little things to where now, all that's taught is like “Just take this pill. That's the only thing you need. Nothing else matters.”

Dr. Nuzum: Right, right, right. Like that pill's going to keep you alive.

Jonathan: Yeah. Well, and they talk about like I mean—we're talking these herbs and spices and remedies have been around for 4,000 years, but they only became popular and were used because they were working, right?

Dr. Nuzum: Correct.

Jonathan: Now I'm not saying that modern medicine isn't phenomenal for the antibiotics and different things, and especially like you break an arm or something like that. It's wonderful. And I'm not saying that there's not a place for pharmaceuticals. I just think that it's—the pendulum has swung so far in one direction that it's on its way correcting. We can see that in this space now. As much as they're fighting it, as much as they're trying to ban vitamins and supplements and things like that, it's not going to happen.

Dr. Nuzum: Right.

Jonathan: The pendulum should swing back. But I think where we are now is we are—we're all the way up here, finally coming back to “Let's find that balance between pharmaceuticals and supplements.”

TeriAnn: Yeah, I think that's a good question in the conversation of how did we go from the 1930s, where everything was so readily available, they started shutting down schools, getting rid of all that, to what, in your opinion, brought us back to this modern movement of healing our own bodies and taking supplements again and understanding the nutrients our bodies need, nutrient deficiencies, all those things. What do you think was the tipping point of all that to bring it back to light again?

Dr. Nuzum: You know? What's really interesting is there are a couple of “founding fathers” of the modern supplement industry. One would be Royal Lee, Dr. Royal Lee. He was a chiropractor, and he started a company called Standard Process, which is still around today. And he was the first to do nutritional supplements that were food-based, whole food-based supplements. He was the pioneer of that, and that was back in the 30s.

The other group that really propagated, I guess would be the right word, a supplement industry were the health food stores, of all groups. They were the ones that stayed up on a lot of the nutritional research and things like that. They were the ones that would carry nutritional products if a company would make them. And that's how the supplement industry grew out of—it was the baby that got tossed out with the bath water from the pharmaceutical industry. The pharmaceutical said “Eh, we're going to go with these chemical drugs that we can make billions of dollars on. This stuff, you can't patent it because it's food.” You know?

TeriAnn: And obviously, there was still a movement out there of people who supported this, if you think about those health food stores. I think 10 years ago, most people would have been like “What's that?” And now, if you look at what's on the map as far as health food stores and how many people are going and shopping and buying there, they're massive.

Dr. Nuzum: Right, it's massive.

TeriAnn: It's a huge movement.

Dr. Nuzum: It's a huge movement. And it's good because people are, they're getting back to—they're regaining their power.

TeriAnn: To heal their own body, absolutely.

Dr. Nuzum: To heal themselves, exactly.

Jonathan: We're taking responsibility again, right? I mean we've gotten very lazy as a society, right?

Dr. Nuzum: True.

Jonathan: I mean just everything we want to be fixed right away, we want it right away.

[crosstalk 0:24:41.4]

Jonathan: Yeah, I want it now, I want it right away.

TeriAnn: Yes.

Jonathan: Like we're just—we've gotten very lazy.

TeriAnn: Well, and I think, too, we go to our doctor and we just think they know everything and understand everything, but we don't put it in our own hands to say, "I need to research and understand my own body and how it works, and not just trust this person that's talking to me." And that's not to say that doctors are bad or that they're not giving you good information, but I think we need to take that power into our own hands.

Dr. Nuzum: Absolutely.

TeriAnn: What does our body do for us and what do we need? And everybody is unique. No one is the same. And so, one pill will not necessarily fix everyone. It's a fascinating concept that a lot of people need to hold onto and run with.

Dr. Nuzum: You're exactly right. That's totally true.

Jonathan: Well, so the interesting conversation, where you talk about you go to your doctor and you have to research on yourself, I mean your doctor just knows what they've been taught, right? And you don't know what you don't know. So, go to your doctor and talk to him, but then, go to your naturopath as well, because they were taught different things.

And go to this other person and talk to them and take these different experts that have had different trainings and figure out what you need for your body. It's a lot—you just have to understand, I mean just going to your doctor and saying, "They're going to know it all," they may act like they know it all, but they only know as much as they've been taught.

Dr. Nuzum: Correct.

Jonathan: And it's our responsibility to take it into our own hands, not to believe everything that you read on the internet, not to read every meme that goes through Facebook and believe it as truth, but take some ownership of it, too. Take some ownership that this is your life. Nobody has control over you and your body more than you.

It's not your doctor, it's not somebody else, it's nobody else's responsibility. It's not mine to fix you. It's not anybody. It's not Doc Nuzum's job to fix you. It's your job to find out. And sometimes, the answer isn't the right answer right away. You have to try different things. You've got to see what—how does your body respond? What works? What doesn't work?

Dr. Nuzum: Absolutely. That's absolutely the truth. And what I do with patients when they come in, my first question is "So, what brought you here? And I don't mean your car. How did you end up here? Because there had to have been a process that brought you to this, if you're in my office to see me, there had to been a process of things that, or a procession of things that brought you to this place, right?"

And so, I need to know that process. As a doctor, I need to know what brought you here. Okay, now that we know how you ended up here, we can plot a course back to health." But it's never one thing that makes someone sick, ever. If you're chronically ill, it wasn't one thing that made you chronically ill. There's a culmination of factors that came in and it—some of them maybe have been "someone else's fault," majority of them are going to be your fault.

Jonathan: Sure.

Dr. Nuzum: That's just how it is. So, we go back to the supplement industry, as it progressed, again, I look back to Dr. Royal Lee as kind of one of the founders, especially in the whole food supplement industry. He was the pioneer of that. And even today, if you were to look up Standard Process, some of their remedies today that they're selling, some of their formulas they have are still some of his original formulas from back in the 30s. He was freeze-drying beet root juice, and carrot juice, that kind of stuff.

So, that thing started back then, and it has been propagated and carried over from health food stores, chiropractors, naturopaths, people that are practicing the natural medicine and things. Those are a lot of the remedies that they were using. And then that's caught on, and more and more companies have caught on and done very similar things over the years.

Capsules and tablets, those types of things, capsules didn't really come into the play in the supplement industry until the 70s-80s, really. Almost everything was either a tablet or a liquid prior to that. And now, as we've transitioned, I mean there's massive technology available to us today. There's—some of the scientists I work with are, they're just ridiculous, some of the things that they know and can do with basic nutrients. It's just real, real amazing.

And then, we bring in things like herbal extracts. And you take any common herb, you take parsley, or cilantro, things that you'd see on the dinner table, a carrot or a tomato. Typically, fruits and vegetables, and herbs and spices, and things like that, each plant will have typically, around 300 phytochemicals. And the interesting thing is, even within the species, those phytochemicals will change. In some species, the phytochemicals are the plant—the medicinal components of the plant, the phytochemicals, will change in the growing cycle of that particular plant.

So, you take coriander, which is cilantro, coriander is totally different than cilantro. They're the same plant, but you take coriander seeds, or cilantro leaves, and the composition is totally different. And so, what you could use coriander for, you wouldn't necessarily be able to use the cilantro for. You know what I'm saying?

So, today, there's been so much research on the components and the chemistry of herbs and spices and mushrooms and all these different things, that in our industry now, where 70-80-90-100 years ago, herbal remedies were based on more tradition and what people had just been using for thousands of years, and sometimes they'd stumble on this herb, that herb.

If you look up the Hoxsey story, there's a really cool story, and his, with Dr. Hoxsey, he used—he discovered an herbal remedy watching his horses. And horses that had specific issues would eat specific plants. He had some family members that were having similar issues, fed them the same plants, and they got over it, too. With time, it took him about 10 years of trial and error and research and whatnot, he came up with a remedy.

The Biomedical Center in Tijuana was his last clinic, it was based on using his herbal remedy for cancer treatment. Their whole program still incorporates his old remedy, and that remedy's from back in the 30s.

Jonathan: It's fascinating if you think about how all of these remedies became remedies, right? Who were the first people to try stuff? What did they stumble upon? "Let me try it for this long." How many people ate poison ivy thinking it was going to fix something and found out that wasn't a good thing to eat, right? Or different things like that.

TeriAnn: And if you look at the industry today, it's a good question to ask. Because people, we have more knowledge about the human body now than we ever have before, right? And when you go back to that conversation of everyone is unique in what they need and what their body needs. We have to start catching onto that thought process because everyone will heal differently, everyone will function differently, everyone needs different things. But it's a good question. People watched things and they've saw a need to help support the body in one way or another, right?

Dr. Nuzum: Right.

TeriAnn: And so, they've started trial and error of things. And that brings us to where we are today. And now we know so much about the body that there's so many things that you can do. There's so many different remedies. And the question comes up, why are people supplementing? Why—what in our body needs that supplementation, and why do we need that supplementation? And how do we choose? That first question of why do people supplement? Why are people taking these supplements now? This movement has picked up again. We know that we can heal our bodies naturally. We know that supplementation does that for us. But why supplement? What does that do for our body?

Dr. Nuzum: I'll give you real quick, there's—I have two answers to the question “Why supplement?” First off, here in the United States, we go back 100 years, we had about between 3-4 feet of topsoil. When you plant crops in soil, they extract nutrition from the topsoil. So, 100 years ago, we had between 3-4 feet of topsoil. Today, we have between 4-8 inches.

TeriAnn: Wow.

Dr. Nuzum: So, our—let's put it this way. Our nutritional account, our nutritional bank account that we had 100 years ago, had 3-4 feet worth of cash in it.

TeriAnn: Now it's depleted.

Dr. Nuzum: Now we're depleted down to 4-8 inches worth of cash. That makes sense. Hopefully—

Jonathan: We've got to borrow the money from somewhere, right?

Dr. Nuzum: Right, right. Well, even if we're growing good organic food in that soil, the soil doesn't have the nutrition—it isn't concentrated enough in nutrition for the plants to have. One of the basic concepts in chemistry is that elements are either present or not. You can't create them, and you can't destroy them. So, if the elements aren't present in the soil, it doesn't matter what you're growing on it, they're not going to be present in that either. Does that make sense?

Jonathan: I think it's such an important thing for people to really understand what you just said, right? Because it's like yes, "Hey, this is organic and it's this and it's that." But if the mineral wasn't in the soil to begin with, it's not—it doesn't matter how clean you grew your vegetable, it's just not—it can't appear out of nowhere, right?

Dr. Nuzum: Absolutely. That's exactly—that's my point, exactly, exactly. Which is why food concentrates are so important. Concentrates. That's—when we designed everything for Organixx, everything is a food concentrate. We've taken massive amounts of fruits and vegetables and concentrated them down into a capsule. Pounds and pounds of fruits and vegetables down in this little capsule.

TeriAnn: Well, and that's because today, even if people are eating a healthy diet, and they're eating organic, they're still not getting everything that their body needs. And again, that's different for everyone. You can get tested for what you're deficient in and all of those things, all these supplements you can choose from, but people need to take these because you're still, even eating a healthy diet, not getting everything that your body needs uniquely to you, and that's different for everyone.

Dr. Nuzum: I have been practicing for a long time, and so, in doing nutritional profiles with people, doing different tests and things like that, I can't tell you how many times I've taken identical twins, we've tested them for nutritional deficiencies and different toxicities and things like that, and they, on the outside, they look identical, right?

TeriAnn: Totally different on the inside.

Dr. Nuzum: Totally different on the inside.

TeriAnn: Wow.

Dr. Nuzum: Completely different I mean. And many times, when we're testing for food allergies and things like that, what one would be allergic to, the other one isn't, and vice versa. And so, they literally had opposite—what this one could eat, this one couldn't, what this one could eat, this one couldn't. I'm—over and over again I've seen this, many, many times. This is amazing.

So, what you're saying is absolutely true. This world is made of 7 ½ billion individuals. We're—not one of us is the same. And one person's deficiencies may be another person's toxicities even. Like in the—that's why I'm using these twins as an example. One could eat tomatoes; the other one it would cause an allergic reaction. And they had interchangeable things like that. Just amazing, you know?

My other point for supplementation is, okay, so the soil's depleted, that's number one. Number two, if someone's eating the standard American diet, the standard American diet only supplies trace amounts of 17 of the between 73 and 90 essential nutrients that you need on a daily basis. So, depending on the scale, certain people will count certain things as nutrients, other people count them as accessory nutrients, right?

So, at minimum, there's 73 nutrients that we need on a daily basis to replenish. These are vitamins, these are minerals, things like that, right? The scale can go up to 90. So, if you're only supplying 17, and this isn't optimal levels, these are trace amounts of 17—

TeriAnn: We're basically not getting any of the nutrition that our body needs to function.

Dr. Nuzum: Man, you're looking at right around 20 percent, 20 percent of the nutrition that someone needs on a daily basis if they're eating the standard American diet. My analogy for that is if we went to your car, we ran—

Jonathan: I knew this analogy was coming.

TeriAnn: I love this analogy, by the way.

Jonathan: I've done this interview with you before.

TeriAnn: I love this analogy. It's Doc's nuts and bolts. It's all Doc's, and I love it.

Dr. Nuzum: So, if we went to your car and we randomly removed 80 percent of the nuts and bolts from your car, how fast would your car break down? And that's—

TeriAnn: Could you even drive it?

Dr. Nuzum: Could you even drive it? Would it start?

TeriAnn: Yeah.

Dr. Nuzum: Would it turn over? And if it did turn over, how many things would break? Think about that.

TeriAnn: Compare that to people, how are people getting up and functioning in the morning?

Dr. Nuzum: Exactly.

TeriAnn: And living their best and most full life.

Dr. Nuzum: Here's the scary thing. How are children growing to be healthy adults if they're only getting 20 percent of the nuts and bolts they need to grow properly?

TeriAnn: Yeah, absolutely.

Jonathan: We see it. We see more obese kids than have ever been before. We see more diabetes among young people than we've ever seen before. We see our whole nation exploding, expanding.

Dr. Nuzum: Absolutely.

Jonathan: And not in a healthy way.

TeriAnn: And disease-ridden. It's awful.

Jonathan: All of it.

Dr. Nuzum: One in five children in the United States is suffering from an autoimmune disorder.

TeriAnn: Whoa.

Jonathan: Yeah.

Dr. Nuzum: That's—

Jonathan: Preposterous.

Dr. Nuzum: It's terrible, it's disgusting. Absolutely.

Jonathan: And I hate to bring it back, and we're going to wrap up here soon, but it kind of goes back to that laziness, right? I think we hit a point in our recent history where it was "Let the TV raise the kids. Let's give them a bag of chips to get them their food." We're coming back from that pendulum being swung so far up, and we're coming back to being more consciously aware of what we're doing, what we're putting in our bodies, how healthy we're being. And hopefully, our kids are going to see that, too. I think a study came out that we now have a generation that's not expected to live longer than their parents. May have woke up some people.

Dr. Nuzum: Yes.

Jonathan: But I think more just waking up in general. So, we've talked about the importance of supplementation. And by the way, this podcast is not to just "Hey, let me sell you on Organixx," this is just to get you healthy and just share the truth. Go find whatever works for you, whether it's our products or somebody else's, doesn't matter. It's about getting healthy. I want to touch on one last thing before we wrap up, because not all supplements are created equal, right?

Dr. Nuzum: Oh, correct.

Jonathan: And specifically, I don't want to talk about us versus them or anything like that, I just want to talk about synthetic versus whole foods supplements so that people really understand that difference. Because it's a massive, massive difference, 100 percent.

TeriAnn: And it goes along with the conversation of just like understanding what you're hearing from your doctor and knowing for yourself that information. The supplement industry changing to where it is now, it's a great thing, but you also have to be educated on what you're taking. And so, it is a great question, Jon asked, "What's the difference between synthetic versus whole food?" What does that look like and how do you know?

Dr. Nuzum: Well, synthetic, there's multiple levels of synthetic, and that's actually the tricky thing. There's multiple levels of synthetic. You have, on the bottom end, you can synthesize vitamins, and you can extract minerals from petroleum byproducts. And they do. I'm not kidding. This is—some of your vitamins with cartoon characters, we can't use any names, but that's where these things are coming from.

Jonathan: Say that again. Where are they extracted from? So, people at home really understand.

Dr. Nuzum: Petroleum byproducts, okay? This is when they—they extract oil out of the ground and they refine it, the byproducts of that refining process, you can take and extract vitamins and minerals. You can synthesize vitamins and you can extract minerals from those byproducts. There are those things occurring in—

Jonathan: In nature.

Dr. Nuzum: In nature. It's there. Not that it's healthy and not that—just because a vitamin looks like a vitamin under a microscope, and it came from petroleum byproduct or a carrot, just because it looks the same doesn't mean it acts the same. You can take synthetic vitamin C, ascorbic acid, and I use the analogy of a box. It has—let's just say it looks like a box. So, synthetic ascorbic acid, you can extract, in most cases, this is the case in the supplement industry, most ascorbic acid is extracted from GMO corn. Didn't even come from an orange. There wasn't an orange or nothing citrus in it. It's extracted from GMO corn.

So, here's this box, that when you look at it under a microscope, it looks like vitamin C, it's identifiable as vitamin C, or ascorbic acid. When you do further chemical analysis on it, you find that it is an empty box. So, when you take ascorbic acid, chemically synthesized ascorbic acid, you may have to take 6-7-8,000 milligrams of that ascorbic acid to get a therapeutic benefit, for it to actually deactivate a virus in your system or that kind of thing. It's going to take massive amounts.

When you come over here and we extract vitamin C from a lemon, and we take that and isolate that vitamin C, the box is full because it has the other compounds, the bioflavonoids, the flavonoids. Flavonoids are flavor. That's the component of the orange that contains—or the lemon that contains the

flavor of lemon. Those are very sticky compounds, but they're, in the plant kingdoms, your flavonoids are some of your most potent antioxidants. So, when you have ascorbic acid from a lemon, the box isn't just the vitamin box. It has the flavonoids in it.

Jonathan: It's actually substance in it, right?

Dr. Nuzum: There's stuff in it, there's substance in it, right, right. So, you take 20 milligrams of that, it will give you the same effect as 5,000 milligrams of this ascorbic acid.

TeriAnn: And what are the negative side effects of that side?

Dr. Nuzum: Well, eventually—here's the problem. Here's the problem with synthetics. Is your body knows the difference. Your body knows what is food and what is chemicals. So, eventually, if you're taking synthetic, synthetic, synthetic, synthetic, your body's going to recognize it as a synthetic. And initially, a synthetic can correct a nutritional deficiency. Your body will, since it doesn't have anything else to use, it will go ahead and use it.

Jonathan: You just need massive amounts of it.

Dr. Nuzum: Correct.

Jonathan: The efficacy is way lower.

Dr. Nuzum: Way lower.

Jonathan: But it will try to extract what it can.

Dr. Nuzum: Exactly. It will try to use it, because it doesn't have it coming in from anywhere else.

Jonathan: Absolutely.

Dr. Nuzum: So, it will take this, even though it's an inferior component, it will take that, and it will use it, but eventually, it will start rejecting that synthetic, which leaves you in a worse case, because now you're actually—that synthetic nutrient will act as like an anti-nutrient eventually. Well, we don't run into that with whole food, food extracts, because food is what we were designed to be eating, and our body knows the difference.

TeriAnn: So, when you're talking about that synthetic versus whole food product, how—where's the best place for people to go to understand information about it? Because probably, the most beneficial thing they can do is look at the back of their bottle, what's in their supplements and understand, right?

Jonathan: Right.

TeriAnn: And where can people understand that information? Where's a good source to go for that? Because there's so much around that. And we can link that later and look at that, but there's places that you can go to understand your ingredients and all of those things. You need to know what's in your product.

Dr. Nuzum: I like the Environmental Working Group, EWG. I like that group. You can go to their website. EWG's really, really good. And they're more a toxicology watchdog group, if you will. So, they're looking at, okay, here's x-y-z ingredients. And they look at food, supplements, cosmetics, all kinds of things. Their website, there's a massive database. And they actually give ratings as to how toxic something is or how untoxic it is.

TeriAnn: And why is that important for people to understand how toxic their products are?

Dr. Nuzum: Well, exposure. So, if you're brushing your teeth with a toxic toothpaste every day, three times a day, or if your kid is. It's not one exposure to most small, mildly, or even massively-toxic things. A small dose won't cause a major injury.

TeriAnn: But over time, it will.

Dr. Nuzum: Over time, it's going to accumulate. That's the problem. And so, with—that's why I like the Environmental Working Group. They have a really good—

TeriAnn: Yeah. So, when you're talking about people being educated between synthetics and whole food, what people need to understand is that just because someone sells it and tells you that it's good for you, doesn't necessarily mean that it's good for you. And you need to understand what you're putting in your body because that can really impact your body in a significant way.

And so, I love that we have that, the Environmental Working Group to look at and give people more information. I think people need to understand more information around the ingredients and the things that they're putting into their body, what's going into their supplements. Like all products they use, but specifically, supplements, if you're using them to help your body be stronger, be more healthy, let's make sure they're actually doing that and understanding going into the process of making those supplements. They're not all created equal.

Dr. Nuzum: No, not at all, not at all.

Jonathan: So, with that said, I'm going to wrap up our conversation. To kind of close things up, if you're wondering "Is this a synthetic or not?" Likely, if it's a one-a-day commercial on TV, it's likely a

synthetic. Go to your health store and ask for whole food supplements. Start there with somebody that knows. If you're not sure where to start, go to your health food store.

Go to Organixx.com. We have tons of videos, tons of articles. Our whole objective at Organixx is just to get people healthy. If our supplements help you do that, wonderful. If our education helps you do that, wonderful, right? Whatever it takes to get you healthy is what we want to do.

So, I want to thank you guys for being on here. Thanks, TeriAnn, thanks, Doc.

We're going to do another episode. On our next episode, we're going to talk about what's in your supplements. So, we're going to get a lot deeper into—Doc talks about there's different qualities of synthetics. There's different qualities of whole food supplements as well. So, we need to understand that so you're really picking something that works for you.

We're also going to talk about nutraceuticals versus pharmaceuticals and really understanding that difference. So, stay tuned on our next episode. Let us know what you think about our podcast. Comment below, share this with your friends, and thanks for tuning in.

TeriAnn: Thanks, everyone.

Dr. Nuzum: Thank you.