



Dr. Drew Sinatra: Food...it's a constant in our lives. We love it, and we need it like the air we breathe. But do we really think about the variety of foods we should be eating?

Dr. Steve Sinatra: One critical thing you can consider is the color of your food. Is your plate colorful enough to help manage your health concerns, like blood sugar, as an example?

Dr. Drew Sinatra: Today we're joined by Dr. Deanna Minich, an internationally recognized scientist in the field of nutrition. We'll be talking about "eating the rainbow," and the healing power of food. What can you do to make your meal more colorful?

Narrator: Welcome to **Be HEALTHistic**, the podcast that's more than just health and wellness information — it's here to help you explore your options across traditional and natural medicine, so that you can make informed decisions for you and your family. This podcast illuminates the whole story about holistic health by providing access to the expertise of Drs. Steve and Drew Sinatra, who together have decades of integrative health experience. **Be HEALTHistic** is powered by our friends at Healthy Directions. Now, let's join our hosts.

Dr. Drew Sinatra: Hi, folks. If you like what you hear today and you want to listen to future conversations on all things integrative and holistic health, subscribe to our podcast at [BeHealthisticPodcast.com](http://BeHealthisticPodcast.com). Also, check out and subscribe to the Healthy Directions YouTube channel, which features video versions of our episodes, plus extra videos you won't want to miss. And finally, we have more with me, Dr. Drew Sinatra, my dad, Dr. Steve Sinatra, and other health experts at [HealthyDirections.com](http://HealthyDirections.com).

Dr. Drew Sinatra: Well, welcome, everyone, to another episode of **Be HEALTHistic**. Today we have Dr. Deanna Minich, an internationally recognized teacher, author, scientist, speaker, and artist. She has more than 20 years of diverse, well-rounded experience in the fields of nutrition and functional medicine, including clinical practice, research, product formulation, writing, and education. Her doctoral research focused on essential fatty acid absorption and metabolism, and her master's degree allowed her to explore the health benefits of the colorful, plant-based carotenoids — something that we're going to be talking about today.

Dr. Drew Sinatra: Deanna has authored six books on health and wellness, and over 15 scientific publications. Currently, she is on the faculty for the Institute for Functional Medicine and the University of Western States. Deanna's passion is teaching a whole self approach to nourishment and bridging the gaps between science, spirituality, and art in medicine. She's a visionary for the integrative approach to



nutrition, spanning the physical, emotional, mental, and spiritual aspects of one's being. Well, welcome to the show, Deanna.

- Dr. Deanna Minich: Thanks for having me. Glad to be here.
- Dr. Steve Sinatra: Yeah, Deanna, it's great that you're here. One thing, Drew, my son, and you and I have in common...I mean, you're a Ph.D., Drew's an N.D., and I'm an M.D. But what do we all have in common? We have one degree in common. What is it? Do you know?
- Dr. Deanna Minich: Well, we all like food, we like nutrition...
- Dr. Steve Sinatra: Drew, you know, right? Well, we're all Fellows of the American College of Nutrition.
- Dr. Deanna Minich: Okay. Well, there you go!
- Dr. Drew Sinatra: That's right.
- Dr. Deanna Minich: Another added layer of nutritional wisdom, there.
- Dr. Steve Sinatra: Exactly. I'm really proud that Drew got in, because I don't think there's that many naturopaths that are actually Fellows in the American College of Nutrition. So it's a great credential to have, and again, it's all about commonality. So we all have that degree, and it's really great that we're talking about nutrition today.
- Dr. Deanna Minich: Love that. Congratulations, Drew, glad you're part of the American College of Nutrition.
- Dr. Drew Sinatra: Well, Deanna, I checked out your website before our session today, and I got to tell you...that picture of you, with the green shirt and the green eyes, that's one of the best pictures I've seen in a long time, just the color coordination there. And it goes with what we're going to be talking about today, which is all about the color in food. So I thought that that was so appropriate, looking at your picture, and how beautiful of a photo that was...with your eyes and the green shirt, it was awesome.
- Dr. Deanna Minich: Wow, thank you so much. Yeah, I'm really, I would say a messenger of all things color. I feel like color is medicine. It's a healing principle, something that we can all connect to. So, thank you.
- Dr. Drew Sinatra: Well, let's talk about color, then. So, in regards to foods, let's start there. What do you educate your clients on, your patients on, about colors in food. Why is it



so important, and what can they do to incorporate more colorful foods into their diet?

Dr. Deanna Minich: Well, I want to back up a little bit, because I've been in nutrition a long time — and long enough to know that things swing like a pendulum. Whether it's the macronutrient amounts — so, high fat, low fat, high protein, low protein. I think people get so fixated on macronutrients, and it's always swinging. It's trending. So, much of my graduate work was focused on carotenoids, and carotenoids are the plant pigments, things like lycopene and beta-carotene, alpha-carotene, beta-cryptoxanthin — all of these beautiful colors that we find in nature.

Dr. Deanna Minich: So what I began to realize is that, if we look at the science, just simply looking at the evidence of what has stayed true, one of the things that I have found to be the common thread is truly fruits and vegetables. It's plant-based foods. And that doesn't mean that people need to switch to being vegan or vegetarian. I think that if we can all make small strides in the direction of something that we know works, namely that of getting more plants in our diet — whether it's fruits and vegetables, it could be herbs and spices. Even now, I'm drinking tea. Tea is chock-full of different phytonutrients. In fact, in some cases, it actually rivals a serving of vegetables. So, yeah, that's my common denominator. Dr. Sinatra opened up with talking about: what is our commonality? I think about that with nutrition: what is our common denominator? And, to me, it's making sure that we have a bedrock of plants in our daily diet.

Dr. Steve Sinatra: Yeah, Deanna, that's well said, because if you look at the chemistry...what is there, like, 720 carotenoids and over 3,000 flavonoids in nature? So think about it, if you eat fresh fruits and vegetables and use your analogy of the colors of the rainbow, at least if you do that, you may take in dozens and dozens of carotenoids and flavonoids, which are really health-promoting. And that's really what our listeners really want. In other words, how can you promote your health and achieve optimum health with a healthy diet of carotenoids and flavonoids? So I think you're the perfect guest for this show.

Dr. Deanna Minich: Well, and if I think about...I know that you are very much in tune with nature, getting back to nature, and that's what naturopathic medicine is based on, hence the name. And if you look at what nature advocates, it's diversity, it's complexity. It's not just having large amounts of one thing. Nature likes small amounts of many, and just what you spoke to is a great way to launch into this discussion, because truly, yes, 750 carotenoids. We have thousands of flavonoids. In total, the last number I've seen for the tally for phytochemicals is something on the order of 10,000. So how did we become so enamored with the three musketeers — protein, carbohydrate, and fat? And we moved away



from talking about these very potent, non-caloric signaling agents to our cells, and to our microbiome.

Dr. Steve Sinatra: Well said, very, very well said. I have to tell you, I am delighted that you're on the show today, because you're the perfect partner to really talk about this subject.

Dr. Deanna Minich: Well, it's my passion, right? In fact, in some cases, people say, "Well, Deanna, your message of 'eat the rainbow' is so simple." And I always say, "But it's grounded in very deep science." It's one of the things that we cannot arm wrestle. I think we can arm wrestle meat, we can arm wrestle dairy, we can arm wrestle soy. I mean, you name it, there are so many different nutritional hot buttons. But we can't arm wrestle, to a large degree...and I know that some people will come back and say, "Well, Deanna, what about the lectins? What about the oxalates?" They'll start to pick apart these different things with all different reasons not to eat plant foods. But much of how we prepare plant foods is really telling as to what they're going to do in our bodies. There's a method to that, as well.

Dr. Drew Sinatra: Well, can you speak more to the lectin piece? Because that has become big in medicine these days.

Dr. Steve Sinatra: Oh, that's a big, controversial piece. I'm glad you're bringing it up, Deanna. That's important.

Dr. Drew Sinatra: Yeah, can you speak more to the lectin issue? And, really, first off, what lectins are, and how they're affecting the body?

Dr. Deanna Minich: Sure. Lectins are certain compounds in primarily plant-based foods, things like legumes, primarily legumes and whole grains, but also things that are seeded, like tomatoes. So, there was a strong position and statement made in the field some years ago about how a lectin-rich diet leads to different clinical conditions, like autoimmune disease. So, when I started to look at the science of that, and I really looked under the hood, because I wanted to understand — is there a case for anti-nutrients? Or do we just not understand these nutrients enough? And so we call them anti-nutrients, but they might actually be medicinal. Of course, there are things that are toxic in nature, and we need to be balanced.

Dr. Deanna Minich: But when I went into the science, and in fact, I'm about ready to submit a manuscript that a nutritionist and I have put together over the months looking at the science of all of these proclaimed anti-nutrients. Is there science to support this? And so, what we find is that if you look at traditional cultures and diets — if you cook foods, and you soak them, and you sprout them according to



how they would normally be eaten, you actually get inactivation of these lectin compounds, which are these glycolipid compounds.

Dr. Deanna Minich: Now, that said, Dr. Aristo Vojdani, who you both know, is a brilliant Ph.D. in immunology, and I've interviewed him before. And he talks about, yes, there is a small percentage of people who do have some food-related reactivity to these lectins, and I don't doubt that. I mean, just like histamines in food, or...there can be any number of things. But keep in mind, as we all know, nature provides us with a vast palette. We are not just limited to five foods in nature. So, if we don't do well with certain foods, then we just try to get those same compounds, whether it's the carotenoids or the flavonoids, polyphenols, whatever it is...we move to other categories.

Dr. Deanna Minich: Let me just say one more thing about that. I think, why not turn the tables on our thinking of lectins? Maybe if people are responding to lectins in terms of gastrointestinal issues, what could be happening is that that compound is signaling that there's a disturbance in the gut. Maybe we need to look at it as not just avoidance, but maybe there's something in that plant that actually is messaging back to us pathology or some type of dysfunction that we need to pay attention to. So maybe it's not the food — maybe it's us, and our bodies.

Dr. Drew Sinatra: Well, I have never heard that argument before so that is great to hear, because I don't want people listening to this to get all fearful of lectins. Because I've seen my patients come in, and they can't eat bell peppers anymore, they can't eat legumes, they can't eat all these good foods. And that concerns me, when food becomes a fearful thing in their life, because we need to promote good foods for people for their health, and not have them be fearful of food. So I really like that point you just made about perhaps the lectins are indicating that there might be an underlying pathology present. Perhaps the gut is inflamed, there's dysbiosis, there's something going on there that's creating that reaction from the lectins being present.

Dr. Deanna Minich: I think so, and I've seen that, as well. Most people know if they're allergic or intolerant of nightshades. I'm a person that can't do a lot of tomatoes, I actually will get a rash if I do way too much. During my grad school days, we did lots with tomato paste...I think I reached my threshold with tomatoes, unfortunately. And I'm Northern European, and so, tomatoes aren't part of our diet. I think we do need to look ancestrally at what we were eating over generations. Is the Mediterranean diet for everybody? I'm not sure about that. So, maybe it's not just lectins, maybe we need to look at our genes, ancestrally. What have our genes been seeing over centuries?



Dr. Deanna Minich: One of the concepts that I just recently put on my Instagram page is this whole idea of micro-rotation. Drew, you just talked about how people have so much fear on food, and it's so true. I remember working with somebody who came to me, she kept a spreadsheet of all of her foods. And basically, she was down to five foods that she could eat, and now she was afraid of what would happen if she couldn't eat those five foods. So I took the opposite approach. How about we go back to you eating most everything, but really small amounts? Again, I call that micro-rotation, where you have small amounts, not enough to be an offender, but enough so that the body gently responds to this, in terms of seeing it in the gut rather than refraining from it so that when we're exposed, now we have a huge immune reaction.

Dr. Drew Sinatra: Yeah, I'm certainly into what you just said, as well, because I find that, at least for me in my practice, the whole gluten and dairy thing...I'm sure you're all on top of that, as well. For most people, they don't do well with gluten and dairy. And so, I don't want to limit any more foods for them. And I love this idea of the micro-rotation of foods, because that ultimately plays into the elimination diet. Once you've done an elimination diet, you bring foods back in to find out your reactivity level. And this might be a really smart way to do that, too, so thanks for bringing that up.

Dr. Deanna Minich: Yeah, I think so. And I think another clinical tool for everybody listening...my three principles are color, creativity, and variety. Most people are in food ruts, they're eating the same thing over and over again, they're afraid of their food choices. They know that certain foods are safe for them, but that does not enrich the gut microbiome. So I have a handout for people, and I've done this in group settings. It's a 50 food, so 5-0, 50 food, seven-day challenge where they count up all of the unique, novel, plant-based foods that they can get in one week's time. And the goal is just 50, and I've done this in very large groups. I had one woman in Australia who got to 232 different plant-based foods.

Dr. Deanna Minich: And I don't put a limit on the size or the quantity. I just say, qualitatively, look at your plate. How many things did you put in that smoothie? How many things do you have in that stir-fry? Just count up the color, let's keep this fun. Let's not get into analysis paralysis, we've had enough of that in nutrition. And it's amazing how people just turn on to, "Wow, I need to try a different food," or, "I have more spices now." And so, I do think that this concept we're talking about right now, diversity, bringing it into eating a varied diet. It sounds like it's something we've heard before, but we're not doing it. Just like eating the rainbow, we're not doing it...so we need new tools to get there.

Dr. Steve Sinatra: So, Deanna, I have a question. In our society today, there's probably 100 million pre-diabetics or diabetics in the country. And if you figure it out, it's 1 in 3.4



people. With diabetes being the major comorbidity in what's going on with COVID-19 now, what foods would you recommend to people that are borderline diabetic, foods that don't elicit an insulin response, so to speak? I mean, we talked a little bit about the legumes, but there are foods that don't elicit significant amounts of insulin, which I think could be sort of provoking the situation where, if you're not releasing insulin and you're not tiring out the pancreas, and you're not raising your blood sugar — could eating certain foods protect you in this day and age of COVID-19?

Dr. Deanna Minich: That's a great question. Indeed, I do think that the nexus of glucose and insulin, and even cortisol, is all very important. So, when you ask, "What are some foods?" I will go through some foods, but I first want to state...and I know that you both understand this, but I want to be sure everybody listening does, is that everybody has a personalized response to even blood sugar. There is science now to suggest that your gut microbiome may actually personalize your response to a food. It may not be that that food has a static glycemic index. We might be changing in our glycemic response. So stress can change it, physical activity can change it. You go for a 15-minute walk after a meal, you're going to process that food differently than if you didn't go for the walk. So sometimes it's not just the food. We're so used to looking outside of us and saying, "What is the food?" We need to look at the terrain, the milieu within us.

Dr. Deanna Minich: I was just interviewing somebody yesterday on this, talking about how continuous glucose monitors and getting information on how we respond to certain foods is now more readily available. There are apps, there are different devices and technology. This, I see, is the benefit of technology. Technology's a double-edged sword, but I think that, as Dr. Jeff Bland would say, "If you don't measure it, you don't change it." We need to be on the pulse of what changes blood sugar, because what changes blood sugar will change inflammation in the body. And inflammation changes immunity.

Dr. Deanna Minich: But I do want to give the listeners, just maybe...let me just talk about three foods, very simply, and I'm sure you both can add to the list. One of the biggest things that comes to my mind, I want to go back to tea, because it's something everybody can do. The longest-living cultures in the world are punctuating their day with tea. And green tea, which is rich in catechins, and I know that epigallocatechin gallate gets a lot of the limelight, but I think that probably there's a lot of different types of those compounds, those catechins, that have a blood sugar normalization effect. So having some green tea with a meal might be a good thing.

Dr. Deanna Minich: The second one would be cinnamon. Cinnamon is an insulin sensitizer. We know that it's warming, and what it does...here's something really unique. There's a





new concept in the literature about beige-ing, like the color beige, where white fat cells turn into brown fat cells. And the brown fat cells are more thermogenically active, they're burning more heat. That's a good type of fat tissue, you want brown fat tissue. So cinnamon actually helps in the beige-ing, or the browning, of white fat — which is so important, especially in prediabetic or diabetic conditions, right?

Dr. Steve Sinatra: Yeah, especially in weight gain, as well. That's a really great point.

Dr. Deanna Minich: Yes. Yes, and a lot of those studies right now are just in vitro, they're in cells or in animals, we haven't used them in humans. But there is good data that cinnamon, in general, is an insulin sensitizer. So we definitely know that.

Dr. Deanna Minich: The last thing I'm going to mention, and it's a collective term rather than a specific one, is fiber. Fiber! And where do you get fiber from? A lot of different things, and diabetics, prediabetics, and most of our dysmetabolism is coming from a distorted microbiome. We need to get our microbiome diverse. It's not just throwing on the fire more probiotics, we need to change the terrain. And so, whatever fibers we can be bringing in, and I'm all about rotation of fibers.

Dr. Deanna Minich: Now, I was just looking at a paper the other day about blueberries. Blueberries have a certain fiber, the skin of the blueberry, that is worked on by the gut microbiome, and gives us more of a beneficial class of bacteria called bifidobacterial. Blueberries, just simple blueberries. And the pterostilbene that is in the blueberry itself, in that beautiful blue-purple color, can also help with blood sugar control. I think so many diabetics are afraid of fruit, and I feel like we've gone down the wrong path on that. I think we need to monitor personalized responses, but things like berries can be very beneficial.

Dr. Steve Sinatra: Yeah, and actually blueberry is really supportive to the brain, as well. It's, I think, a really outstanding fruit to take into our society today, because it has so many medicinal advantages. Even the blood sugar with the fiber is an interesting correlation. I mean, certainly the more fiber you take in, the greater time that you're going to have for insulin release. Meaning that you're not going to get sudden surges of insulin and blood sugar relationships in the small intestines. So I like that, especially for the heart. That is really beneficial to the heart.

Dr. Deanna Minich: I was wondering when we were going to talk about the heart!

Dr. Drew Sinatra: You know what, though? Hold on, I want to go back. Sorry, I want to go back to the fiber piece and the terrain, because I think that's really important here. What do you suggest to your clients when they have a lot of gut dysfunction happening? There's dysbiosis or something like that, there's increased





inflammation, they have lots of food reactivity, food intolerances, etc., and they react to fiber. Because I find that to be very common, where people have some apple pectin or some psyllium husks or some flax seeds...I know these are different forms of insoluble versus soluble fiber. But they tend to react, by lots of increased gas and bloating, and discomfort, and all that. So what are your tips for increasing fiber in the diet, at least with those things that I mentioned, but also with fruits and veggies? Because lots of people can also start reacting to more fiber in the diet from fruits and veggies.

Dr. Deanna Minich: You're absolutely right, and that's why some people have some fear around it. So, in functional medicine, we talk about a 5R approach to gut health. So, when I hear things like that, when people are complaining of bloating or gas from having more fiber, one thing is they probably have an overgrowth of microorganisms that needs to be addressed. And that can be done under the guidance of an N.D., an M.D., somebody that's well trained to do that — either through pharmaceutical agents, or through botanicals that have antimicrobial, antifungal, antiparasitic activity. One that comes to my mind is berberine, it's a potent antimicrobial. It can really alter the microbiome, and it has blood-sugar-improving effects. So, whenever I hear something like that, I'm thinking, "Uh-oh, something's going on. They're not digesting properly, they have an overgrowth." So, many times, that needs to be dealt almost first, before you start layering on the fiber.

Dr. Deanna Minich: And I'm just going to mention a basic thing, because I've noticed that people don't really know how to use fiber. They think, "Let's just pour on the Metamucil and just gulp it down." They don't really take in enough water. I think it needs to be diversified, smaller amounts, copious amounts of water. Because what I actually saw in practice was that people were constipated and bloated if they had lots of fiber. And then the moment that they changed to different fiber sources, because not all fibers suit every person, and they had adequate water.

Dr. Deanna Minich: I feel so passionate about water and minerals. I mean, minerals, to me, are...oh, my gosh, they're the forgotten...they're like phytonutrients. We forgot about minerals, ultra-trace, micro/macrominerals. And so, much of how we absorb things and how we interact is based on our foundation, much of which is connected to minerals as co-factors. So, long story short, there's a lot on the 5R program, but people need to work with a practitioner to get the gut in balance so that they can properly receive the fiber, and benefit from it longer-term.

Dr. Drew Sinatra: Yeah. Thanks for talking about that, because that's a really important piece there. So now we can jump into the heart, if you guys want to talk about some heart-specific foods.



- Dr. Deanna Minich: I knew it was coming up.
- Dr. Steve Sinatra: I think some of the best foods are the ones that contain CoQ10 and omega-3s. I mean, I've said it before, I'll say it over and over again. As a heart specialist, if I were stranded on a desert island, I would want CoQ10 and omega-3s to be washed ashore, those are my two favorites. So, Deanna, just lead into that.
- Dr. Deanna Minich: Yeah. Well, if I was stranded on a desert island, I agree, those are important. But I would want to add to the list, if I'm thinking of my heart, because when you focus on the heart, everything improves. We're talking vasculature, we're not just talking about the mechanical pump of the heart. We're talking all the superhighways to the brain, and getting things out of the body. So one of the things that helps with blood vessels tremendously is leafy greens, especially bitters...bitter, leafy greens. And I think, I'm curious what you both think on this — I think vitamin K is the next vitamin D.
- Dr. Deanna Minich: Vitamin K is...actually, it comes in multiple forms, but the kind in leafy greens is called phylloquinone. And vitamin K1, or phylloquinone, has many roles. It's pleiotropic. It's like vitamin D in some ways, it has vessel effects, it has bone effects. And often there is this signaling back and forth between the blood vessels and the bone. And so, I think, if I had my choice on a desert island, I want the extremely nutrient-dense, dark-green, high-bitter, high-nitrate greens that I know are going to help my heart, my vasculature, and ultimately my brain and survival.
- Dr. Drew Sinatra: Is that something like arugula?
- Dr. Deanna Minich: Yes, arugula. I mean, look at the celery craze right now, right? Why does celery seem to work for some people, why is there such a craze? And I'm sure that you've addressed this with your audience. If you look at the literature on dietary nitrates, celery is one of the higher ones, it falls into the same camp with arugula. And when you increase nitrates and you digest them and break them down to nitric oxide, theoretically you're going to be more relaxed. You're going to have vasorelaxation and dilation.
- Dr. Deanna Minich: You can actually measure, for everybody listening...you can go online, and you can buy nitric oxide strips to see. You just take these little strips, they look like pH strips, you put it on your tongue. And you can see what is your basic, baseline level of nitric oxide production? And if you're low...I remember being low, I was a low, pink color on this spectrum. You'll see it's done by color, it's very easy to do. I was thinking, "I need more greens." And some people are going to need more because maybe they're athletes, they're more physically



active? Or they need less because of that. So I think that this is really important, and also folates.

Dr. Deanna Minich: I think, Dr. Sinatra, you were going to say something about folates, and we think of methylation being important for the heart, bringing homocysteine down. Well, where do we get folate? Green, leafy vegetables, primarily. That's why I'm in love with them. And when you look at them up close...I'm just so in love with plants. If we look at them long enough, we just see that poetry. We can actually figure out what they're good for. And you look at a leaf, and you see the vessels, you see the vasculature. It's a work of art. So that tells me that we need that, and the science supports it.

Dr. Steve Sinatra: You're absolutely right. What you're talking about is nitric oxide and its effects on endothelial cell dysfunction. And the more endothelial function you get versus dysfunction, the more supportive it is to the cardiovascular system. So I'm in full agreement.

Dr. Drew Sinatra: Deanna, I wanted to ask you with that, and as a follow-up — does it matter if it's raw or cooked, leafy greens, for the folate connection?

Dr. Deanna Minich: Yeah. Well, we know vitamin K is a fat-soluble vitamin. So, I do think a little bit of steaming is completely fine. I think, back to your question about people getting bloated from all this fiber in all these plant foods, if they cook their foods and they steam them...we're not talking about wilted-wilty, where it's lost the color. We're talking about steaming, one minute, 30 seconds, even less for leafy greens.

Dr. Drew Sinatra: Quick.

Dr. Deanna Minich: Yeah, very quick...but it retains its color, and it becomes more digestible. And even bringing in a little bit of fat to help with the vitamin K absorption. We don't need that for folate and some of the...we don't want to cook them in a lot of water, because we're going to lose the folate, we're going to lose vitamin B12 and some other things that we could find in green, leafy...well, not B12, a number of other Bs that we could get from this class of vegetables.

Dr. Drew Sinatra: Well, great. Deanna, as we wrap up here, we always finish up with a **Wellness Wisdom**. So, if you had one big pearl of wisdom with regard to eating the rainbow, what would it be?

Dr. Deanna Minich: Okay, so let's go with variety, let's stick with that. I do think that, in this time of COVID-19 where people are stuck at home, they're not going to the grocery store a lot, they are working with what's in their cabinets...they need variety.



Variety helps with plasticity, neuronal plasticity in the brain, heart rate variability in the heart, and even metabolic flexibility. I think that if we can increase variety, even in terms of our experiences in life, even as we're sitting at home, it's the crown jewel. It will help us in so many respects, it'll begin to open up how we think and how we feel.

Dr. Deanna Minich: And one of the effects, I just want to mention to everybody before we close is, it's not just that plant foods help your body to function better. There is significant literature showing that eating plant-based foods actually helps with a better mood. So it's not just memory and learning in the mind and vasculature, it's reducing anxiety, reducing depression, helping with psychological distress. And during this time, when so many people are stressed out, if we can make the best choices for ourselves, we're going to feel better, we're going to make better decisions. It's like the body and mind will be working together through that diving rod of plants.

Dr. Steve Sinatra: So, Deanna, what type of plants would you say you would get the most bang from? Would it be onions, garlic, artichoke, avocados? Name a few that you think would be really good, especially with this COVID-19 epidemic we're in, or pandemic.

Dr. Deanna Minich: Although, let me just first say that that's like asking a mother to say her favorite child.

Dr. Steve Sinatra: Well, you must have some favorites.

Dr. Deanna Minich: But, okay, I can give an objective, science-y answer to that, because there was a great article published some time ago, and what they did is they put all of the foods side by side, and they just simply looked at antioxidant potential. Now, I think antioxidants is so 1990s, it's an archaic way to see the beauty, but let me just go with that as a standardized way, because when people say, "Oh, these foods are superfoods," I don't know what they mean. I don't know what a superfood actually means, I'd like to have some kind of quantification.

Dr. Deanna Minich: So what's at the top of these lists, when you look at antioxidants? Well, this is going to make a lot of people happy when I say this...or at least, people who like chocolate. Cocoa is really high on the list. It changes mood, it changes the vasculature, it's a vasodilator. So I'm going to say cocoa — but not the sugary kind, I'm talking raw cacao powder. I'm talking you go to Trader Joe's, or you go to a store where you can get organic cocoa powder, nothing else added, and you incorporate that into your smoothie. This is huge bang for the nutritional buck, so to speak.



Dr. Deanna Minich: Number two is berries. I mean, the smaller the berry, the better. The good thing about COVID with food choices here is that getting frozen berries is a good thing. You do not destroy the actives in berries when you freeze them. You do with greens, so try to aim for fresh when it comes to greens. But when it comes to berries, they're pretty hearty. So cocoa, berries, and the number three thing as it relates to how do you get these...I'm going to go back to tea. And I would say a variety of teas, don't just stick to green tea.

Dr. Deanna Minich: One of the things I'm very concerned about in our environment is the toxic burden. The only way to protect ourselves, I think, because we can't avoid huge classes of food...and even fruits and vegetables are going to have some degree of toxicity because of the water, the air. We just can't avoid it, right? So one of the ways to encourage resilience is to have diversity in the different food. I'm never loyal to a brand of food, I'm always rotating it. Trying to rotate brands, I look at different ones. And so, I do think having a variety of different teas, preferably loose-leaf teas, because we know that those plastic bags of teas liberate microplastics when you put them in heat. So I want us to be thinking about toxic burden. Let's try to minimize that while we're all at home.

Dr. Deanna Minich: So cocoa, berries, tea, if I were...and of course, I mentioned the leafy greens. All three of these things are high in antioxidants, which would help us with the cytokine storm, with any kind of viral load, infectious load. What we want to do is amp up our antioxidant defenses, and those three things could do a very good job.

Dr. Drew Sinatra: Deanna, now I want to make a smoothie out of cocoa, berries, and then make some tea, cool it down, and then add it in there. I mean, that's a terrific combination right there.

Dr. Deanna Minich: Well, I have a very good nutritionist mentor friend, her name is Barb Schultz, and she knows of the benefits of green tea, and she doesn't like the taste. It's too bitter for her. And we know that super-bitter tasters actually fare better in certain health parameters. So that's a good thing that she's a super-taster, but it's not such a good thing that she doesn't want to drink it. So what she does is she brews some really...just long-time brews green tea, so that it gets very bitter. And then she uses that as the base of her smoothie. And so instead of using the alternate milks and such, using tea as the base, bringing in some protein powder, a little bit of healthy fat. Gosh, I could've said avocado because I didn't mention...

Dr. Steve Sinatra: My favorite.

Dr. Deanna Minich: Holy smokes, there are so many great studies on avocado.



- Dr. Steve Sinatra: Oh, yes.
- Dr. Deanna Minich: One medium-size avocado is 9.2 grams of fiber, and then you get folate. You get potassium. People think of bananas with potassium, but you get 422 milligrams of potassium in a medium banana, and you get 690...you get almost 700 milligrams of potassium in an avocado. But, yeah, back to Drew, your smoothie idea, I just wanted to throw that out there for people who don't like tea that is bitter. You can use it as a base for your smoothie, and you won't even know that you have it, if you make it chock-full.
- Dr. Drew Sinatra: Well, Deanna, this has been such a wonderful discussion on nutrition, and colorful foods, and foods to help heal the heart, and our immune system, and our gut and everything. So thank you so much for coming on the show today.
- Dr. Deanna Minich: It's been a delight, I think very highly of both of you. I feel like I know the family, even though we were at a distance, right? And then, I think it's wonderful, and being on the board with Dr. Sinatra all this time at the American College of Nutrition, and the great work that you're both doing, I just applaud you both. Thank you for having me on, it's been a pleasure.
- Dr. Drew Sinatra: Thank you.
- Dr. Steve Sinatra: It's been great for me, Deanna, as well, and I hope to have you on again. Maybe next year we can do something in depth, because we just scratched the surface today. And I'm sure our listeners are going to want a lot more information going forward.
- Dr. Deanna Minich: It's so true. Thank you.
- Dr. Steve Sinatra: All right.
- Dr. Drew Sinatra: That's our show for today, folks. If you have a question or an idea for a show topic, please send us an email or share a post with us on Facebook. And remember, if you like what you heard today and you want to be an active member of the **Be HEALTHistic** community, subscribe to our podcast at **BeHealthisticPodcast.com**, or on Apple Podcasts, or wherever you download your favorites. You can also find more great content and information from us and the Healthy Directions team at [HealthyDirections.com](http://HealthyDirections.com).
- Dr. Drew Sinatra: I'm Dr. Drew Sinatra.
- Dr. Steve Sinatra: And I'm Dr. Steve Sinatra.



Dr. Drew Sinatra: And this is **Be HEALTHistic**.

Narrator: Thanks for listening to **Be HEALTHistic** with Drs. Drew and Steve Sinatra, powered by our friends at Healthy Directions. See you next time.