Introduction to Food Vibrations and Phytonutrients

the molecular structure imparts a certain vibration and frequency. So when we have things that are chemically synthesized or human synthesize, it doesn't quite have that same, I would say, resonance that something from nature would have.

And so that really lends us into the whole topic of phytonutrients and why it's so important to get those colors because color, as we know, is a wavelength of light.

It's a particular wavelength. And by getting all of those colors, then we do get all those unique frequencies that we need at the cellular level. This is Dr.

Talks. Diana Minick, it is such an honor to have you on this segment of Cancer Breakthroughs, our Cancer breakthrough summit. And it's going to be a fascinating topic.

So thank you so much. Oh, my pleasure, Michael. Thank you for the invite. And this is a topic that I have so much passion for, personal and professional passion, especially when you see family members and friends over the years that have had cancer.

I feel like this definitely something I felt strongly about. So thank you. Yeah. And for everyone out there, Diana Minick, she's a certified functional medicine practitioner, is a nutrition scientist, international lecturer, teacher and author with over 20 years of experience in academia and in the food and dietary supplement industries.

Throughout the years, She's been active as a functional, medicine clinician in clinical trials and then her own practice, food, and spirit. which has now become oriented towards groups, workshops and retreats.

She's the author of six consumer books on wellness topics, four book chapters and 50 scientific publications. Her academic background is in nutrition science, including a master of science degree in human nutrition dietetics from the University of Illinois at Chicago.

and a doctorate in medical sciences from the University of Groningen in the Netherlands. For decades, she was part of the research team led by the father of functional medicine, Dr.

Jeffrey Bland, and has served on the nutritional advisory board for the Institute of Functional Medicine, as well as on board of directors for American Nutrition Association.

And the list goes on, there's a lot of things you've done, but then we would just take up the whole segment of our discussion. Yeah, let's not bore people too much.

But I think the takeaway is I've been in nutrition a long time, and that's really where I spend a lots of my time and effort. And one of the fascinating subjects, because when people talk about food, then we talk on nutrition.

Should we do plant-based? Should do a ketogenic type of diet? But I want to go beyond that. into kind of the vibrational energy, so to say, of food, because to me, any kind food any kinda herb, they actually carry a certain energy with them over and beyond just the molecular structure.

And I feel that that is so important for our health. Yes, well, and actually one begets the other, meaning that the molecular structure imparts a certain vibration and frequency.

So when we have things that are chemically synthesized or human synthesize, it doesn't quite have that same, I would say, resonance that something from nature would have.

And so that really lends us into the whole topic of phytonutrients and why it's so important to get those colors, because color, as we know, is a wavelength of light.

It's a particular wavelength. And by getting all of those colours, then we do get all those unique frequencies that we need at the cellular level. And of course, we get them at the physical level as well in the way of the actual nutritional aspect.

But I think that much like you're alluding to, We can see food on many different levels.

Biophotons, Mitochondria, and Cellular Energy

There's the Physical, Emotional, Mental, more of a spiritual connection aspect, and then I would also say the more energetic vibrational. And all of them are relevant.

I don't think we can't ignore any of that because They're all a part of our being as well. So I'm glad that you brought that up. Yeah, and we have, I mean, more recent research, when you look at the mitochondria, in my practice, we do a lot of photodynamic therapy and photobiomodulation where we use intravenous laser therapy, external laser, therapy in order to be able to kill cancer cells or kill pathogens and also then activate the Mitochondria.

What they're finding is that the miterchandria of the different complexes are very color sensitive, meaning that they get activated by certain frequencies, certain colors.

So, you know, bringing them food in to activate the mitochondria becomes a very powerful tool in order to be able to enhance cellular health. Wow, absolutely.

You're diving right into the physics of eating here, which I love. I don't get to talk about that too often through summits, so this is a delight. When I think of the mitochondria, I truly think the chi of this cell.

The chi, the ki, prana. It's even been referred to as chi in a scientific paper. So what does that mean? That's like the energy harvester. And if we look very closely into the mitochondria and the pathways, especially things like oxidative phosphorylation, which is a way that that mitochondrion can extract energy, it's kind of like the finish line of the metabolic processes.

And through that process, there are these cytochrome enzymes. If we just think of cydochromes, cytaecell, chrome color, you know, what the Mitochondria is doing at that very basic level, is extracting energy from these bonds of color that have been formed within foods.

So I think it's really beautiful. I mean, it is not new work. If we look at Dr. Fritz Popp and other people in this whole arena of biophysics, So many people have done research on different aspects of food, spoilage, how to increase the bio-photonic.

I would say to preserve that within the food rather than to have emissions because then that's a sign that we have what's called more of the oxidative spray or we're decaying, we are going rancid.

So, you know, I think eating in its own way is an act of harnessing that energy in some ways connecting into those bio photons, connecting it to the light.

And the lights in the way of sunlight, full spectrum light is connecting us to color. You were talking about emissions when they do research in regards to emissions.

Obviously with that, it comes so people understand that when you're then ingesting these foods with these colors, you essentially are creating emissions of biophotons within your own structure.

Yes. And unfortunately, we don't have a lot of science to look at the effects of, okay, if I eat a banana, what kind of emissions, biophotons are created?

So really we're just looking into other studies that have more or less, I would say, looked at it mechanically or even biochemically, but I would say I'm still waiting for more clinical data.

So where we can actually measure bio photons, because I think that the medicine of the future will be taking our smartphone. We put our finger up to that camera or the light.

We get a read on what kind of light that we are emitting. And the goal is not to have light emit. We actually want to keep it and have less emissions so that, we don't have that kind burst, that oxidative spray.

There was one study some time ago looking at meditation. and finding how even the act of meditation could help to conserve one's energy or reduce, from my recollection, the ultra-weak biophotonic emission that happens just naturally from the fingertips, right?

So I just thought that that was so interesting. You know, how do we become more enlightened, have the light on the inside? And I think that, Michael, there are so many things that interfere with that process.

We have electromagnetic fields. we have artificial blue light at night. So many fields around us that are just zapping our energy, creating more rancidity in our bodies.

And that really takes us into something like cancer, because if we think of cancer and the processes that occur, Many times it is from an overabundance of a lot of free radicals where we have this oxidative damage.

And maybe that is happening to the membranes, maybe it's happening the DNA, but we're damaging the body in some way through some external or even internally generated substances or compounds, fields, whatever it is, right?

And so I think that the way to overturn that or to buffer that is to bring in these colors and the colors in and of themselves will provide that reservoir of colorful energy to override and provide antioxidant support for when we are bombarded with so many different stressors in our everyday lives.

And there are many. There are, yeah, we got plenty of them. And so you're talking a little bit about Professor Poffin and his research in regards to biophotons.

Tryptophan, Serotonin, Melatonin, and Light Transfer

In his researching, he talks a lot about cellular communication and biophotons within cellular communications and how different reactions in the body is communicating, orchestrated through then these light particles that are then kind of orchestrating all the events within the body rather than that you have things that are chemically dependent because they've seen that if we are then waiting for a chemical reaction to conclude and then the next chemical reactions will start after that conclusion, things take a very short period of time within a body will take much longer.

So we're then leaning then more into then communication being then done through biophotons. And so then to be able then, to enrich our bodies then with these photons and utilizing then these different tools, you know, like colorful food, likes sunlight, becomes really important for these, these I mean, all tissue to able to function appropriately.

Yes. Oh my goodness. I just want to say that I'm no expert in this area, but the whole area is intriguing to me. And I often get down the rabbit hole of looking at the literature.

One of the things that i have seen recently is if we look at aromatic amino acids like tryptophan. Tryptophane is a really interesting amino acid. So I have stumbled across some literature looking at the conversion of tryptophan to serotonin to melatonin.

Well, as it turns out, if you look at some of the cellular biology literature, it would seem that these compounds, the three of them, which are interrelated, seem to be involved in exactly what you're speaking about, which is that

transfer of bio photons.

So there's talk about how they can help with microtubules within the cell, kind of changing that communication within that cell. And I just think it's interesting because in some way, I think that these are molecules of consciousness.

If we were to think, you know, how do we have the consciousness to make decisions? How do drive our behavior? Well, if you look at even again, just to go back to meditation, because there seem to be a number of studies on that kind of a practice and consciousness, what you see is that serum levels, so blood levels of serotonin and melatonin are higher in people that are long-term meditators.

So people who meditate, they've been doing it for 10 or more years versus people, who don't meditate. even when other factors are controlled for. So it's interesting, are these truly the harvesters of light?

Because they have a certain structure chemically. It's kind of like photosynthesis, right? Why is chlorophyll so important in plants? Well, it has a structure that enables it to carry forth the light into that plant for energy.

And chlorophyll in conjunction with carotenoids. So carotenoids are a large family of compounds, like 700 different compounds. They can be red, orange, yellow.

Some of them are little bit like yellow-green. And so within the plant, there is this almost like a passing of the light baton. where the carotenoids are protective and helpful against too much light.

Chlorophyll is harnessing and moving that light through to photosynthesis. And I think much in the same way in our bodies, this is happening. You know, how do we move cellular communication through through that vehicle of light, those photons.

Now we can't see them. We also have difficulty measuring them, so it's hard to be tangible in this kind of a science. This is where physics meets biology, and we have biophysics.

this is an emerging area. Some people would call this quantum biology. you know, it's like taking quantum physics and applying it to biological systems.

So food and eating and this whole experience of taking in these plant compounds, which all have very unique types of chemical conformations, I believe are helping us in this process of extraction of light the communication in the cell through that conductance of light.

But I think for the average person, that's really hard to kind of put into practical reality, right? So I that the best we can do is we talk about eating the rainbow.

Because through those colorful compounds, which we are seeing with our eyes, we are able to take in color. I see color as a nutrient. So many people just kind of disregard it.

You know, were eating so many brown, yellow and white, lackluster bland foods. These foods are devoid of that high resonance of color and again, what we're speaking about, more of the photonic aspect. I call it sometimes photomic nutrition.

You know, if we want the most vital form of life to bring that into our own being, looking for those colors, I think that that's a good signal in nature.

Yeah, and talking, going back to cancer, here you have then a tissue that is then lacking that vibrancy and lacking the energy, the vitality. And so to be able then to ingest the vibrational energy or that, you know we're talking about biophotons, we were talking We talked about frequency, and we are beings of frequency.

We are being of light. Things communicate, things vibrate. And when they stop vibrating, that's when we're moving

towards death. So then to be able to bring in vibration on a full spectrum level becomes really important because you can then become deficient in certain type of vibrations.

and then your body is not able to communicate and function at the level it needs to. Yes, it's so true. And so any kind of disease state would signify that we're not in that place of harmony at that cellular level.

So when it comes to food, I think that there are certain different aspects that we can key into. One is the pure, i would call it the color red. It is these aspect of survival, protein, the grounded aspect, of eating.

And many of us really need to get grounded. There's so much talk about the microbiome.

Eating the Rainbow and Color-Based Nutrition

Kind of a grounded element, and oftentimes this presents in the way of protein and people have very strong views about what source of proteins that they choose to eat.

In fact, many times the conversation with food and nutrition starts there. Are you vegan? Are your keto? are you paleo? And it's all really rallied around this aspect of how we feel that we most need to ground through protein.

Now for some people animal protein is not an option, for other people it is just about plant protein, So, I think that, you know, probably I would say that you and I probably share a very similar way of how we could view that.

That there's a personalized approach, right? Because when we're talking cancer, now we start thinking about personalized genetics. You and I were talking before we jumped on about our Swedish ancestry.

So we have certain genes that just kind of travel along and we're turning certain things on and off. Then we epigenetics. That's very strong within the whole arena of cancer, and that's well acknowledged.

Similarly, certain foods can be doing that, turning things off and on. But I think at a very basic, grounded level, so many people are focused on the protein.

Nutrition is so much more as we know. It is fascinating how things become simplified, but obviously for people to understand because it's such a complex conversation and when you're dealing with certain health issues and you want it then simplified.

But I think it is important to understanding that we are complex individuals and with that, We need a rainbow of foods. We can't just limit ourselves to one component.

we need all these different nutrients because they, they work in conjunction with each other and they support each, other working as, you know, what you call coenzymes and enzymes and yeah, and so you can just, maybe for a period of time, we can limit yourself, but for long-term survival, You need the full spectrum.

You need the full spectrum. That's true. And back a few years ago, I published a paper in the Journal of Nutrition and Metabolism, and I was talking about the color code.

So even, you know, this is what I typically show is my operating system, the rainbow. Each color of the Rainbow would seem to be keyed into a functional signature.

What do I mean by that? That means that colors in nature to a large degree, maybe not a complete degree because nature is very complex and diverse, so it's hard to put nature into a box.

But through the eyes of patterns, looking at just patterns of how those colors connect to functions in the body, I see that there's a connection. So the way that I see it is that the color red, if we just go back to that for a second, the colour red connects to things like red-colored carotenoids like lycopene, astaxanthin.

It connects two polyphenols that we find in berries. So there are specific kinds of these kinds, poly phenols, that would find red colored foods like pomegranate as an example.

So when I think of red and I look at the science of read, whether it's strawberries, watermelon, cherries, these types of foods, what I see is that there's a connection between those red pigments and inflammation and immunity.

In other words, they would be helpful for creating a healthier immune inflammatory response. Now, in some cases, red-colored foods can perturb the immune system.

We could have a histamine release through something like strawberries for especially children or people with more vulnerable immune systems might be a little bit more susceptible to that.

because of their gut or otherwise. So red in general, I think of the immune inflammatory response. Should we go through each color? I'd think that'd be fascinating for people to understand how colors are reflected in food and then also the impact it has on the human body.

Yeah, yeah, because this will justify why we need the rainbow. If you miss a color, you could potentially be missing phytonutrients and functions. So red is not one that I'm too concerned about.

When I see people's eating, I kind of feel like, okay, people get some red. Then there's orange. So orange would be things like orange fruits, so oranges, persimmons, mingos, tangerines, these kinds of foods, and also vegetables, squashes and carrots and root vegetables.

So what's unique about orange is that we tend to see oranges connected to things, like beta-carotene, which is just one of the many carotenoids, but there are other types of carotenides that would connect to the orange colored foods, like there's another one called beta cryptosanthin.

So orange in the rainbow diet system that I teach and write about is about reproductive health. It's about the fat tissues of the body, the skin, and the ovaries.

Also the brain has a higher concentration of carotenoids. These Often orange carotenoids have an association with things like ovulation in women and even sperm quality in men.

So the head of the sperm is actually concentrated in these carotenoids. And, you know, as you go down the rabbit hole looking at the studies on orange, it's really interesting because even in the animal kingdom, orange is often used as a symbol that connects to mating.

and confers some kind of viability or survival. Like you see that with guppies, you say that was certain birds, which is just interesting. Other animal studies like with goats and cows would suggest that there's an association between certain carotenoids and hormones.

So I don't know, I just think it's kind of interesting that connection between fertility, reproductive health, the adipose tissues of the body and these carotenoids.

And I usually see that people get orange. So it'd be interesting though, then too, is there any kind correlation with the type of cancer and also with which kind color that you might be missing?

Well, goodness, that's an excellent research question. I've never seen that specifically, but there has been a study looking specifically at the ovarian tissue of people with ovariant cancer versus non-ovarian cancer tissue, and they find different levels of carotenoids.

So that is interesting. In fact, it was, I believe, a study from Poland. So that was just intriguing. I think, again, all the colors. Yellow is a color that we find in things like lemons, plantains, bananas, pineapple, ginger.

When I thinking of those kinds of foods, typically I'd think of digestive health. They contain proteolytic enzymes.

which can be important, they contain prebiotic fibers, which could be an important for establishing a good healthy gut.

Some of those foods are also connected to higher levels of serotonin, now we don't know if eating more yellow foods makes you a happier person, but I do think that the banana, the smile is interesting and it also has high seratonin levels.

But we do not know that food serotonin translates to more happiness in the body. I think green, if I were to think about cancer, I would be thinking about green.

In the rainbow diet that I teach I talk about, green is the color of the heart because of nitrates that are naturally occurring, folates, magnesium, some of B vitamins.

It helps to create that healthy vascular system, healthy blood flow. I also think of it as connected to detoxification, keeping the blood pure. And green, it's almost like we're supposed to have green because that is the color that's in greatest proportion in nature.

Green binds things like different toxic compounds in food and can carry it out. So I think that that chlorophyll in green foods is important for that reason, for sure.

So I would be thinking about the binding, the nutritional supportive effects of green foods, like leaves and different legumes and beans of that nature would I think be very important.

But the color that most people don't get enough of out of the whole rainbow is actually blue-purple. It's like the color I'm wearing. So that would be blueberries, blackberries, the colour of eggplant, figs, raisins, purple grapes, even concord grape juice.

Dietary Diversity, Gut Health, and Food Ruts

These foods are precious. They're rare in nature. We were talking about in the north of Sweden, how you get all of these. highly intense berries that are small, they're wild, and they tend to be very high in certain compounds.

Now those compounds would tend be favorable for the brain. So when I think of blue-purple, I'm thinking of the brains. That would be mood, learning, memory.

We see that there is a strong connection in the literature between a number of these studies looking at eating those foods and improving those different markers.

So I think all of the colors are relevant for cancer and reducing the risk of cancer, as well as just overall health. And with most, most people not getting the blue purple color, I do have concerns that they're missing out on certain compounds that are uniquely connected to brain health Is there a way for an individual to, it's like a test or something a person can do to maybe analyze and see what, am I deficient in this color versus that color?

And should I focus more on these, this group of food? Obviously you want to do the whole rainbow again, but can you then analyze to see I'm more deficien this area versus another?

There are some laboratory tests which would involve taking a blood sample and looking at things like levels of beta carotene or certain tocopherols. But as you probably know, it's quite scant and it is not very commonly done and certainly wouldn't be covered by health insurance.

So I think that the way that I've seen most people do it and how I coach people is to very simply use what I call an eat the rainbow tracker, where every day you focus on, and I actually have seven colors on my tracker.

So, I have red, orange, yellow, green. blue, purple, white, and brown. So I bring in the white for cauliflower, coconut, garlic, things of that nature.

I'm bringing the brown for things like cocoa, cacao, tea, different kinds of grains for people that eat them. That's at a very simple level. Am I getting five to seven of those colors per day?

And I've had families like to do this together, children like do it. Now that's one thing, and most people, eight out of 10 Americans have some phytonutrient gap, meaning that they're missing one of those colors.

So that, that is a problem. That's just one level. The other level, for people that eat a pretty good diet, they say, oh, I'm doing good. I eat the rainbow.

that such a simple message. And I say what about, what kinds of red foods are you eating? And typically what happens is that people lack diversity. So they get into what I call a phytonutrient rut, meaning that they eat the same foods every day.

For the red, they have tomatoes, but it's always tomatoes. for their orange, They might always have carrots. Where their yellow, might have a banana. But that's not enough.

You actually have to create diversity within each of the spectra. Of the rainbow in order to get those full, the full breadth of phytonutrients, because each food, even let's just take the green family.

They're all so different. So if I were to eat a green apple versus a red apple. Even though they're both apples. They're going to give me different phytonutrients.

And even if I had two red apples, but different varieties, like a red delicious apple and a pink lady apple, I'm getting two different kinds of sets of phytonutreants.

So I think that there's the eat the rainbow message. have diversity within the rainbow. And that's where many, many people are falling short. They think that I eat a healthy diet, I'm eating all of those colors, but they're actually in a food rut.

Having diversity has been shown to be helpful for so many things. With cancer, one of the things I think about is toxic exposures. I teach on that topic a lot, and I know that you know a lots about that as well.

One of things to help to reduce our toxic load is to rotate our food so we don't concentrate any one particular, I would say, nutrient or even a toxin, right?

And so that's why many times I'm not loyal to brands. I like diversity of brands, of different kinds of even grocery stores. different spices, different herbs, and different brands of tea.

I mean, as long as they're to the higher quality of what we can choose, but then create diversity. So instead of buying a big bag of apples at the grocery store, what I would recommend is, well, just spend an additional minute and pick seven apples that are all different because you're going to get A lot of variety there in variety helps to ensure better nutritional status, reduce toxic load.

It also helps the fortify the gut microbiome and make it more diverse, which will help the immune system, Being much more preventative in the way of looking at that path into something like cancer.

So getting out of ruts is really important from a food perspective, but then also from life perspective. I think that often time one begets the other.

I couldn't agree more. And in regards to the microbiome, it is proven that the more diverse it, the better your immune system is. Also, you're talking about serotonin, and the different neurotransmitters that are produced, how that impacts our health and our our mood and how we relate to other people.

All of that is also produced in the gut. And so the more diverse your type of, you know, food selection is, the different types of food or because all the bacteria, they use different, eat different kinds of fiber.

So one type fiber will promote one area of bacteria and another type will provide another. doing the diversity, you will then have a much more well-rounded group of bacterium in your gut.

100%. I think that dietary diversity is overlooked. And for some people, they won't change how they eat, but they can change what they're eating within that.

So I, oftentimes what I'll say to people is just try one new food every week. And one of the benchmarks, so if people are thinking, well, what does she mean?

How many diverse foods per week? Well, if you look at the American Gut Project and you at some of other types of scientific publications, they would encourage 30 to 50 unique plant foods in seven days.

That sounds like a lot, but it's actually not. For example, you can bring in spices, like spice blends. I have a curry powder that I use at home, and that curry power has 11 unique plants in it.

It's not just turmeric, it's got 11 plants. So just right there, you're getting diversity. If you have an herbal tea with maybe five different plants, now you'll have five.

But now that means that the next day you can't be having that same herbal. You have to be thinking, how can I have something different? So I really do think it's one of those things that's incredibly important for health.

And there's quite, I did a 90 minute lecture just on dietary diversity, going through all of the benefits based on the research, how to measure it. I can tell you that from mood state to the immune system, to nutritional status, as I spoke of, and even to things like fractures and falls in later life, it really does translate.

So I think it's really essential to have color, creativity, and variety. It's important. And Michael, one other thing I would like to address too, as it relates to thinking about cancer, is how we cook our foods.

We could be having diversity in how cook based on seasons, based our bodies. But I thing one of the issues with people is that they are overcooking even healthy foods, making them unhealthy.

So the science is replete, telling us that grilling, broiling, and frying are all producing what would be called advanced glycation end products. These are nasty inflammatory compounds.

And in the body, they create inflammation. They lodge in our skin. they can make discolorations of the skin, that can change and lodge the brain. and cause inflammation.

So one of the familiar advanced glycation end products that most people know about is hemoglobin A1C, which is something that we make in our own bodies.

That's not even from food, right? So that is a glycated protein. We can do a very similar thing in food through the presence of high heat. When we have that brown, crisp crust, Or, you know, we take a piece of bread, and we put it in the toaster, now we have a nice-tasting piece-of-toast, but we actually also increase advanced glycation end products.

Another thing would be even nuts.

Cooking Methods, Heat Damage, and Microwaving

When nuts are roasted in oil, this actually leads to more of these advanced-glycation-end products Now, nuts and seeds and toast, those would not be the heavy hitters.

The heavy-hitters here would bacon. would be taking meats and cooking them, grilling and charring and frying. This actually becomes very inflammatory.

And there have been studies where they show the same meal. One of it is steamed. The other of is broiled or fried. Very different responses in the body, even though it's exactly the food, just prepared differently.

and the one that is fried causes all of the problems. That's probably easy for people to know, but I just want to tell you, it's a big thing, especially when we're thinking of reducing the risk for cancer.

Yeah. And people have such a hard time to step away from their barbecuing, their smoking, and then by recognizing the impact they have on their health.

I mean, we were talking about cancer, But any kind of inflammatory situation moving towards things like dementia, Alzheimer's, which is becoming such as big deal as well.

So all of that will be impacted by improper preparation of food. So it's vital to recognize what is the best way to do it. Yes. And I would say for your listeners, if they're thinking, well, what am I supposed to do?

I'd say, you know, steaming, slow, low moist methods, water is good. Water is a great conductor of heat. In fact, I've been on a cardiovascular summit before with Dr.

Joel Kahn, and there's always a question about cooking with oils. I just don't think we need oils to cook. Even the high smoke point oils, There are different kinds of fats in there that can degrade or break down.

So my preference is always heat with water, you know, just steam, poach. I think that those are better methods. You don't have to eat raw. That's not for everybody.

And sometimes you need just a little bit of heat to liberate the fiber away from the nutrients so that they can be absorbed. Especially like the carotenoids, so I do think that that cooking is important now.

Let's just say that you still want to have that hamburger on the barbecue. Well, before you cook the burger. Put spices in it actually even put blueberries in.

Then cook it and then put half of an avocado on top. Now you are buffering yourself against the inflammatory effects of whatever carcinogens or, you know, and I can't say that for in all cases to the same degree, but you'll at least be reducing a lot of the main offenders that would be causing inflammation.

Talk to me about microwaving. Microwaving is a different kind of cooking. So it doesn't produce the same burning and charring and that grilling and frying does.

The thing with, you know, it's interesting because you don't really find a lot of data to suggest that microwaving as bad, but what microwaves does, so it vibrates the particle rather than have heat go from the outside in, which is why you get more of the crusty outside versus the inside.

Micrewaving, is just vibrating those molecules of food all at the So, the thing that I don't like about microwaving is that, you know, it generates a field.

So I have a gaussmeter, and a Gauss meter measures an electromagnetic field, so you can take the gausmeter and then just move it through your home and you see, where do I fields that can't see?

They're electric or, I've got things plugged in. You know the microwave emits a fields when it is doing its cooking. But I'll just be straight. I don't think that there's a lot of science to show that it is an inferior method.

And in fact, it might actually preserve certain nutrients because then they're not being lost in water or not subjected to high heat. But for me personally, I do not choose to use it.

So the house that we live in, actually it did have a microwave that came with the House, but we don't use it. I don' know, just philosophically or just, it just doesn't feel right as part of the cooking process.

So I try to, but so for some people, I don't think it's terrible. I just don' think if you're going to use a microwave, don´t stand in front of it when you´re using it.

And, you know, just look at the containers that you are using within the microwave because again, subjecting heat to plastics could be detrimental. You start to release certain compounds.

So just be thinking about those things. Yeah. Yeah, I agree. And I just wanted to kind of bring back a point that you made in regards to when you pick food and diversity, you know, and pick from different stores, buy apples from stores because you have then apples that are grown in different soils, different climate, so they will Based upon that, they will create different phytonutrients.

So then that will then enhance the diversity as well and mineral content, nutritional content and so forth. And buy in season when you can. I do think that the science on that as the traditional literature and kind of the ancient ways of eating have always encouraged that.

What we would see is that It's really fascinating actually, like fruits grown at certain times of the year have certain phytochemical compositions that can metabolically affect us differently.

Now there haven't been a lot of human studies doing this, but there have been animal studies and it's fascinating to see how certain polyphenols like in cherries eaten at certain times of the year can have different effects, hormonally.

So be very, very in tune with whatever is in your local environment. You know, I have a good friend, you might appreciate this one, Michael, because it really connects to the land and to did a lot of gardening with me on our property.

So we live on five acres and we have these nice gardens. Well, they're not so nice. I haven't worked on them so well this year, but he would also say that whatever is growing on your property is probably what you need.

You know, so I often think of, okay, I have a lots of dandelion, a have lot nettles, is there a liver immune At certain times of year, why does nature present us with those things?

How can we be more savvy about keying into that? Why do we get apples in September? We have about three apple trees and in september they're exploding with apples.

Well, apples are rich in polyphenols or rich and quercetin, they're anti allergy. And that's perfect for the time that we start to feel more immune compromised when we move into a different season.

We might have seasonal allergies crop up. So I just think that if the more that, we harmonize to nature. the more in alignment we can be. And I guess the only other thing I'd like to say too, this has been on my mind with respect to temperature, just to go back to that topic for a second.

You know, I don't know what it is, but I have. family, friends, colleagues who have experienced more in the way of laryngeal and throat issues, cancers related to this area.

And one of the things to be very cognizant of is the temperature of foods that we take in. You know, so many people are drinking coffee, tea on the run, you know?

They go to cafes, they go those drive-through cafes. They're drinking those coffees in those plastic containers and the temperature is hot, hot. I'm always the sensitive one.

Letting that cup sit there and waiting until it cools to room temperature. But just be careful of that very tender mucous membrane, the mouth. because it just requires a lot for your mouth to have to repair that over and over again if you're damaging it through hot liquids.

And that could be soups, broths. Anything that you are heating actually. It could even be like a meal of solid food. it doesn't have be a liquid. I'm just thinking in terms of liquid beverages, how much that's commonly done and people drinking potentially very high temperatures of those things.

So sometimes it's not the food or the beverage, it is how we prepare it, how consume it. What is our mindset? Are we really in that place of awareness?

I think all of those things, circadian rhythm and that kind of timing is also key. And looking at your food, gazing at you food prepares your system to be able to utilize those phytonutrients even better.

So it kind starts a whole digestive process by observing the food for a little bit and taking a moment to appreciate it. Yeah, there's so many aspects of food that I, think the culture, the American culture and how we consume our food.

Seasonal Eating, Food Temperature, and Mindful Meals

has really moved us away from healthy eating. And so it's not always that the kind of food is also how we consume it. We can consume a green apple in the wrong way, and then it just doesn't become as beneficial for us as it should be.

Yes, and to that point, which is excellent, I think even smelling the food. You know, in the process, sometimes I wonder if people do better at home with cooking because they can actually smell and there is like a building up process of the olfactory system.

And we're learning so much about the aspect of taste, taste receptors, tastes receptors found through the body. and also the old factory, the smell, The odors are so strongly connected to the brain.

to memory centers, to our digestive tract. That actually initiates the salivary juices, right? We start to get hungry just even smelling certain foods.

So I really do think that rather than having to take copious amounts of digestive enzymes, doing exactly what you're suggesting, which is spending a couple more minutes on being in that food, that meal time experience, smelling the food.

Just being there eating. with community or if you're eating by yourself, just really being attentive, chewing, not scrolling on social media or watching the television or reading on Kindle.

You know, but really some of those silent meals can be very profound in many ways. And there are some studies on setting an intention and then having mood state change after a meal.

There was a beautiful study with tea. where people didn't know that there were certain kinds of teas that were either blessed by a Buddhist monk, I think it was, or there was no blessing.

And what the researchers found was that, there is an amplification of mood when they drank the tea that had been blessed, and they didn' t know it as blessed.

But when had to drink the te again, they knew it's blessed? It was like it took it to a whole other level. So I think that our, we eat our intention. This is why I grew up Catholic.

And I, think one of the best practices that I had growing up was that of saying grace, you know, giving thanks for the food, given thanks to the farmer, or giving things to that animal, give thanks the plant, whatever it was.

It just sets your, the tone for your psychology, which then informs your physiology and your energetics. Yeah, I love it. Well. Deanna, this has been so fascinating.

You're so amazing in the research that you're bringing forth and what you are educating people about in this arena.

Where can people go to learn more and to experience this type of eating more intentionally?

That's a good question. There are some resources out there. If people go to my website, it's my name, which is Deanna. So on my web site under resources, I have so many downloads that people could just take for free.

I have a food and mood tracker. I recently put this together, like a way to cook food, and what are best practices with that. So we talked about that, so that's available on the website.

And then I would just say, you know, social media, I do like to make a lot of infographics that connect into the energetics as well as the physical aspects.

People would be able to find that on Instagram. I love it. Well, thank you so much, Deanna. I really appreciate this conversation. Thank you. It was lovely.

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