

DOPE LABS

Transcript of Lab 048 : Your Daily Dose

Zakiya: You know, Titi when we think about the top of the new year in this series. People always talk about drink more water, I'm going to eat more leafy greens and I'm going to do this, this and that. But one of the things I've been seeing that feels like a trend lately is those personalized little vitamin packs. Have you seen those?

Titi: Yes, I have. And they're all over my Instagram. I see those just as much as I see all of these wig ads.

Zakiya: And that really got me thinking, how much vitamins is too much vitamins?

Titi: Yeah. And are these vitamins really doing what they're saying, they're doing? Or is it just like, really good marketing?

Zakiya: Yeah, is this I love Lucy Juice. I want to know.

Titi: I'm Titi.

Zakiya: And I'm Zakiya. And from Spotify, this is Dope Labs. Welcome to Dope Labs, a weekly podcast that mixes hardcore science, pop culture and a healthy dose of friendship. Well, we just talked about immunity and we bumped into some things that we realized maybe we need a little bit more information about.

Titi: Yeah, the immune system is so complex and so many parts of our bodies play a role. And so then it makes me think about zooming out and how do we keep these other parts of our body healthy? Is there things that we can do? And then the natural progression for me is what am I putting into my body? This week we're talking all about vitamins. We've seen so many different supplements and vitamins on the market, but how do they really work?

Zakiya: Let's get into the recitation.

Titi: So what do we know?

Zakiya: Well, I think we can all agree that vitamins are generally important for our overall health and our immune system. We learned that in the last lab.

Titi: And I know that when I go into my local CVS or Rite Aid or Walgreens, that there is a huge aisle filled with vitamins and supplements. So I know that that industry is big.

Zakiya: Yes. And if you think about that entire aisle, there are some vitamins and supplements that have pretty well-documented biological functions like we know what they do.

Titi: And I think that people use the words vitamins and supplements interchangeably. But I don't know if that's right.

Zakiya: That's a really good question. Is it right? So I think that leads us right into what we want to know.

Titi: Yeah. So I want to know what the differences between vitamins and supplements and what should we be thinking about if we're thinking about taking them?

Zakiya: Yeah. And then even though we may know what a vitamin or supplement does, what's the best way to get it? You know, how does our body use it or absorb it? Is there a best practice? Because I think I've seen like liquid vitamins, pills. People say eat more spinach.

Titi: I've tried them all. But then it's just like, is a balanced diet good enough for some of these vitamins? I don't know. Should we be taking vitamins and supplements? How much? Does it work.

Zakiya: Right. Let's jump into the dissection.

Titi: Our guest for today's lab is Dr. Alice Lichtenstein.

Dr. Alice Lichtenstein: My name is Dr. Alice Lichtenstein, I'm the Gershoff professor of nutrition, science and policy at the Friedman School at Tufts University.

Titi: Dr. Lichtenstein is also director of the Cardiovascular Nutrition Team at the Jean Mayer USDA Human Nutrition Research Center on Aging.

Zakiya: We know our bodies need vitamins and minerals for optimum functioning. But there is a lot of terms floating around. It feels like sometimes they're used interchangeably. So let's start with vitamins. What are they?

Dr. Alice Lichtenstein: A vitamin is an organic compound that our bodies need to grow and maintain. And yet we can't make it ourselves, so we have to get it from the diet.

Zakiya: There are 13 essential vitamins necessary for our bodies to function properly, and our bodies make two of them vitamin D and K. But the rest we have to get from outside sources. So

those vitamins A, C and E and then the B vitamins like thiamin, riboflavin, niacin, pantothenic acid, biotin, I know we've seen that for our nails and stuff, b6, B12 and folate. We have to get all of that from outside the body.

Titi: And different vitamins are absorbed by the body in different ways.

Dr. Alice Lichstenstein: So when we think about vitamins, we think about them in two groups. One is fat soluble and the other is water soluble.

Titi: Fat soluble means that the vitamins need fat for proper absorption in the body. So some well-known fat soluble vitamins are vitamin A, D, E and K. And that makes sense because the vitamin D that I normally see its a pill, but it looks like there's oil inside of it.

Dr. Alice Lichstenstein: And it turns out for fat soluble vitamins, we don't have the capacity to easily excrete them. It's important to consume them with a food that also has a little bit of fat in it because we need dietary fat to absorb fat soluble vitamins. The concern with fat soluble vitamins is since the urine is an aqueous milieu we can't excrete fat soluble vitamins in the urine.

Zakiya: OK, first of all, shout out to Alice for using the term aqueous milieu. Urine has never sounded so elegant.

Titi: So Dr. Lichtenstein said that there are fat soluble vitamins and water soluble vitamins, and one of the differences between the two of them is that water soluble vitamins are easily excreted through our urine, while fat soluble vitamins aren't. And because of that, high levels of fat soluble vitamins can accumulate in your body over time, which isn't really great.

Dr. Alice Lichstenstein: In terms of the water soluble, that tends to be the B vitamins and vitamin C, and we're not as concerned in terms of high intakes. We are concerned about very high intakes because excess that our bodies can't use get excreted in the urine, and it puts a little bit of stress on the kidney if you have a very high intake of water soluble vitamins.

Zakiya: Yeah. Remember last week when Dr. Gupta said Americans have the most expensive pee? That's because it's so full of and absorbed water soluble vitamins.

Titi: All right, so that gets vitamins down. What about minerals?

Dr. Alice Lichstenstein: A mineral is, as it indicates, it's a mineral from the periodic table. It's specific ones that again, we need for our body to function optimally and we have to get it from diet.

Titi: So vitamins come from plants and animals where minerals are inorganic and come from rocks, soil and water, things like iron, calcium and zinc.

Zakiya: And even though we get them from different sources, both vitamins and minerals are important for our bodies to function properly, and in some cases they work together. You know,

Titi, when we think back to like basic biology that we had. Do you remember all those cycles? And I'm not going to try to haunt you.

Titi: The Krebs cycle. Let me tell you, don't ask me about the Krebs cycle that was a dark time in my academic life as a high school student.

Zakiya: So if you think about what you know about cycles like that, when we consider metabolism and different processes, our bodies, our little cellular factories, they're constantly trying to break down things and put things together, and sometimes they need help. And that help often comes in the form of cofactors and enzymes.

Titi: OK, this is something that I do remember a little bit about. So enzymes are proteins that help speed up a chemical reaction in our bodies. So they're like biological catalysts.

Zakiya: Yes.

Titi: And cofactors encompass a wide range of compounds, but they're sort of like enzymes, little helpers. Their presence makes it possible for enzymes to do their thing.

Zakiya: Look at you.

Titi: I got an A.

Zakiya: You a biologist.

Titi: Oh, let me tell my mom she's going to be so proud.

Dr. Alice Lichstenstein: Cofactor is needed to catalyze that enzymatic reaction. So if we want to do something like utilize glucose for energy, certain of the enzymes that are involved in that process need cofactors.

Zakiya: And guess what? Now that we know the difference between vitamins, minerals, enzymes and cofactors, would you be surprised to learn that there is some overlap between these groups?

Titi: Oh boy.

Dr. Alice Lichstenstein: Many of the vitamins and minerals that are essential, essential meaning that we need to get them from outside the body that is the diet, are components of cofactors or cofactors directly.

Titi: A good example of this is iron and vitamin C in order for the iron to be sufficiently absorbed into our bodies it kind of needs vitamin C to help it along. So they bind together to help pass through our digestive system so that iron doesn't just break apart and then we lose all of those great vitamins. Vitamin C is a key factor that helps with iron absorption so that we don't lose all those really great minerals that we're trying to get from iron.

Zakiya: So vitamins and minerals are essential, and we know we need them to come from outside the body, mainly through our diet. But what if we aren't getting enough of a certain type of vitamin or mineral from our diet? That's where supplements come in.

Titi: Supplements are a way to get these nutrients outside of the food that we eat. They can be vitamins, minerals, amino acids, enzymes or a combination of any of these things. They also come in different forms, so pills, powders, gels and liquids.

Zakiya: I think the important distinction is that supplements are anything that's not a whole food. So you can have a supplement and it is a vitamin or it is a mineral. But there are also supplements that are not vitamins or minerals, you know, when we think about herbal supplements and things like that. So as we move through, we'll talk about vitamins, those things that are part of those essential vitamins we listed earlier and then non vitamins, which we'll just call supplements. I have seen so many supplements, especially over the past few years, a supplement I've been taking for a long time, I don't know if you remember this from grad school Titi, is an enzyme lactase.

Titi: Oh yes, I do remember.

Zakiya: So I'm lactose intolerant and I take lactase, which is an enzyme that breaks down the sugar lactose that's found in dairy. So it makes me able to comfortably digest those foods.

Titi: And I'm in denial about my lactose intolerance, so I just am out here.

Zakiya: Well, good luck to anybody sitting with Titi.

Titi: Good luck to you, Jimmy. In America, dietary supplement use has been growing since the 1970s, and some of the most popular supplements are multivitamins, vitamin C, D, protein, calcium, vitamin B, omega three fish oil, probiotics, magnesium and iron.

Zakiya: I remember I to take these fish oil pills, and this was also in grad school. I felt like I needed a lot of things for health and grad school, but I probably just need to change my environment.

Titi: Just had to get out of that lab.

Zakiya: I had to get out of the lab baby. I remember I would take it, and then later in the day, you would have like a burp and it would taste so fishy. It was awful.

Titi: That why I try and take them at night so that I don't have to deal with that.

Zakiya: You're like I'll just burp this out in my sleep. Or it can be the first thing in the morning. Morning breath was like straight krill and sardines. .

Titi: Oh my God.

Zakiya: You're the first person I knew that's a liquid multivitamin.

Titi: Yeah, I mean, I feel like I fall victim to stuff on the internet all the time. And I saw, you know, Oh, you're not really absorbing a lot of your vitamins. You should take it as a liquid because then it absorbs faster. So I was like, Yes, I'm taking liquid vitamins. Imagine how to drink a cup of slurry its awful.

Zakiya: It's just stuff suspended. And that's an aqueous milieu. OK.

Titi: You eat protein powder?

Zakiya: Do I eat protein powder?

Titi: That stuff is so gritty, you got to chew it. \ Nobody that's doing a protein powder is sitting there just sipping delicately, y'all out there grinding that sand between your teeth.

Zakiya: Dr. Lichtenstein says that generally, if you're consuming a healthy diet, then you probably don't need extra vitamins and supplements. And don't worry, we're going to talk about what exactly a healthy diet means later in this lab.

Titi: In fact, taking too many supplements can actually make your body absorb less.

Dr. Alice Lichstenstein: When we think about the quality of nutrients, what we really think about is whether they're available to the body or not. Obviously, with nutrients and food, they're going to be available because we've been able to grow and remain healthy and reproduce as a society. As far as supplements frequently, the higher your dose, the less you actually will absorb.

Titi: That's crazy because you know, you'll be taking those 10000 mg supplements. And Dr. Lichtenstein is saying that more is just more. It ain't better.

Zakiya: Now, if you have an actual deficiency and that's how much you need, but 10000 milligrams isn't what you need for everything. OK,.

Titi: Right.

Zakiya: You got to see what the daily recommended value is. Some of that is micrograms, not milligrams.

Titi: Yeah, flip that bottle around.

Zakiya: Does it look like a U or is it an M? That's really important. There's also something to keep in mind if you take multiple different supplements. The specific combination of vitamins and minerals needs to be right because one can affect the other.

Dr. Alice Lichstenstein: And then there's certain nutrients that if you have a real high dose of one, an irregular amount or the other, it may actually interfere. On the other hand, we know that vitamin C helps us absorb iron. Vitamin D helps us absorb calcium. So I think we have to be careful about making general statements and recognize that each nutrient is unique. But cavemen did very well, and they live without nutrient supplements. So I would say we're pretty safe.

Zakiya: Once our bodies absorb these vitamins and minerals from our diet or supplements, the nutrients move into the bloodstream through digestion.

Titi: What about what you do to the food before you eat it? Like, is it more potent if the food is raw? I know that there are a lot of people who do only raw vegetables because they want to maximize the amount of nutrients that they're taking in. Does that matter?

Dr. Alice Lichstenstein: Does it matter if I cook the food or I don't cook the food? So in terms of nutrients in food, for the most part, they are what we call biologically available in a form that we can use. And most of the time, it doesn't matter if they're cooked or uncooked.

Zakiya: And biologically available just means that your body can absorb the nutrients from the food or whatever the source is.

Dr. Alice Lichstenstein: Now for certain nutrients, there could be a little bit of a difference. Vitamin C is destroyed by heat. It doesn't mean if you just cook broccoli, you're going to lose all the vitamin C, but you'll lose a little bit of for something like vitamin A, which is in the form of carotenoids in food. It actually turns out if you cook tomatoes and things like carrots, it becomes more biologically available because you're breaking down the cells, the structure that's preventing it from getting out.

Titi: Cooking carrots eat your broccoli raw.

Zakiya: So really, none of this is mattering too too much. You just need to be eating this stuff, right?

Titi: Yeah just eat the vegetables. So for most people, supplements aren't necessary. And in fact, if you're taking too much of a supplement or the wrong combination of supplements, it can actually hurt you.

Zakiya: But sometimes people do need to take supplements. For example, it's common for vitamin D levels to dip in the winter, especially during a pandemic when people are stuck at home.

Titi: Right? How do we know how much of something to take? I've seen supplements with huge doses.

Dr. Alice Lichstenstein: It's best not to choose one that's above the recommended dietary allowance, and you can determine that by looking at the nutrition facts label because you'll see a

D.V. value, which is a daily value and you don't want to take a product that is above 100 percent unless you're specifically told to by your health care provider.

Titi: Just like with anything, we highly recommend talking to your doctor. You can even get a blood panel done to see if you have any particular deficiencies, but your doctor should be the one to tell you if you need supplements and which ones.

Zakiya: Well, Dr. Lichtenstein said, Hey, I know you're trying to get 5000 percent vitamin E but that's not it, girl.

Titi: And it turns out it's not as simple as excreting what you don't need.

Zakiya: Yeah, especially if it's something that is fat soluble, you're probably not even excreting it.

Titi: It is just building up, you're going to start crying it.

Zakiya: I have got to do an audit.

Titi: Let's take a break. And when we come back, we'll talk more about what exactly do you mean by a healthy diet, trending supplements and the importance of education and access. We're back, and I can't believe January is almost over already. 2022 is flying by. Next week our New Year series comes to a close with a lab all about habits with Dr. Wendy Wood. Habits are different than resolutions. Since we've been learning so much about health and wellness, sleep, a healthy immune system and now nutrition. Now we want to learn how to create new habits that really stick.

Zakiya: But for now, let's get back to the lab. We're talking to Dr. Lichtenstein all about vitamins, minerals and supplements. Earlier in the lab, we learned that we should be able to get most of the essential nutrients we need from a healthy diet. But let's break that down. What is a healthy diet?

Dr. Alice Lichtenstein: The general guidelines is a diet that's rich in fruits and vegetables, whole grains, low and nonfat dairy products, fish, legumes, other plant sources of protein like nuts, and then poultry and moderate amounts of meat. And that is limited in added sugar and added salt.

Zakiya: Do you remember the food pyramid?

Titi: Yes, and we talked about that in Lab 033 supermarket sweep about how it's changed twice since we learned about it in school.

Zakiya: All that bread at the bottom. It said have 11 servings of grains.

Titi: Have a loaf of bread for snack, man, we were bloated.

Zakiya: It wasn't right. It was not right. Well, now we know. Well, at least for now, the recommended approach is to go higher fruits and veggies and legumes.

Dr. Alice Lichtenstein: Not only when you get all the vitamins and minerals you need, but you'll also get an adequate amount of fiber. And fiber is important for keeping our GI system moving and maintaining a healthy microbiome that is the little bacteria that are in our GI system. And the benefits of consuming a healthy dietary pattern like that, accommodating it all our personal preferences and our ethnic backgrounds and religious traditions and all those kinds of things. This should be a way regardless to shift anybody's dietary pattern from one that may be less healthy to one that's more healthy.

Titi: According to Dr. Lichtenstein. If you are not getting enough of certain vitamins, it's best to first try to incorporate that vitamin into your diet rather than taking a supplement.

Dr. Alice Lichtenstein: Maybe they're small changes you can make that will again relieve the need for a supplement. Now, why do I think that's more important than just automatically going to a supplement? It's because if we get our nutrients from food, we got a lot of other compounds.

Titi: Foods you eat aren't just packed with vitamins and minerals. There's also stuff like fiber and phytochemicals. So phytochemicals are compounds from plants, and those are really good for you as well. Plus, it's going to be really hard to overdo it with healthy foods as opposed to supplements where too much of it can hurt you. You can eat as much kale as you want. Go ahead, go crazy.

Dr. Alice Lichtenstein: It may be very difficult to teach them out individually because generally they occur in groups, so a lot of them actually are related to the colors of fruits and vegetables. So if you are going to pick, let's say, a green leafy version first salad, you're better off picking spinach or kale or even romaine as opposed to iceberg, because the color indicates how concentrated the nutrients are.

Zakiya: That means beige foods be gone. But Dr. Lichtenstein mentioned one notable exception related to vitamin B12, which we get from animals. If someone is vegan, they might need to consider taking a supplement if they aren't getting the recommended level of B12 in their diet.

Titi: It seems like every week there's a particular food, herb, or supplement that gets the spotlight for its reported or supposed benefits.

Zakiya: Yeah, and you know, this is really nothing new. In the early 1900s, scientists discovered that food contains more than just protein, carbohydrates and fat, and those additional substances were called vitamins. In the 40s government sponsored amounts of vitamins and minerals began to get recommended, and vitamin content was also advertised in products from Ovaltine to orange juice to even donuts. Cod liver oil well was marketed as bottled sunshine. Was that for vitamin D?

Titi: I don't know.

Zakiya: I don't think that marketing would have worked on me.

Titi: I remember the Ovaltine commercials more ovaltine please.

Zakiya: Yes,.

Titi: We were drinking now. It was delicious. Today, the vitamins and supplements industry is worth about 35 billion with a B dollars. And social media has only fueled the fire of different trends. For example, ginger has been proven to help with nausea. Turmeric, which hasn't technically been scientifically proven to have health benefits yet, but lots of people and cultures swear by it for its anti-inflammatory properties. Red wine and dark chocolate had a moment when antioxidants were all the rage. Elderberry, honestly, has had a moment in this pandemic. I think that a lot of folks have been seeing a lot of messaging saying that elderberry can help with if you ever have COVID or preventing COVID.

Zakiya: Yeah, and so this will be an example of a non vitamin non mineral supplement, right? But when we look at what the studies have shown us, there have been a small number of studies that have looked at elderberry. There's some preliminary research that says elderberry might relieve symptoms of flu or other types of upper respiratory infections. And I think that's where things get cloudy because relieving symptoms is different from protecting against infection. Right.

Right. There's no published research studies that have looked at elderberry when it comes to COVID 19 and how it may or may not help.

Zakiya: And I know people are making their own elderberry syrup, right? I wouldn't be able to spot a elder tree out in nature, so maybe I need to do some.

Titi: Even if it hit me in the face.

Zakiya: Right. OK, I need to do some research, but it's a little tricky because if you are having raw or unripe elderberry, they have toxic substances in them and so you can get sick. So they have to really be cooked, they have to really be safe, you know? And so it's just so many different things that you have to consider before you take on a new supplement into your routine.

Titi: Another example we can get to is St. John's Wort, which is a mood regulator. Sea moss, which is rich in many vitamins and minerals and one of the Tik Tok trends that was big over the last couple of years was liquid chlorophyll.

Zakiya: And it feels like there's so many different factors when you're on social media. You can see somebody taking something and it can feel like, Oh, they're taking this thing for their health, but you don't know if it's culturally relevant. And I think things become tricky because even with turmeric? Yeah, there's no trial that shown turmeric as an anti-inflammatory, but turmeric has curcumin in it, which has been shown as an anti-inflammatory so then it becomes like, Well, how much turmeric do you have to have to get the effects of curcumin? And so it can become really hard to tell what's what. And then you start to think, Well, is it better to take this from a

whole food to get curcumin from turmeric? Or is it better to take a curcumin pill? like, who knows? Or should I just take Tylenol as an anti-inflammatory? You know, it just becomes so tricky.

Titi: And then some of these people aren't honest, so they'll say, Oh, it includes turmeric, which is an anti-inflammatory, which, you know, true, and it'll have such trace amounts of tumeric in it that it actually isn't really helping you.

Zakiya: And that's the thing you never know. And this also adds this other layer that's important to remember, and that's that not all supplements are FDA approved, right? So you really have to be careful and do your own research about safety. I remember when I taught an intro biology course, one of the papers that we looked at was like a study where folks were looking at different vitamins or supplements, not necessarily vitamins, but supplements and herbs using kind of DNA barcoding to see if they were actually what they were marketed as baby.

Titi: And what did you find? Tell us, blow roof off this thing.

Zakiya: It was like invasive grasses and stuff. So it's like, we just want to get rid of these weeds, we are just going to pop them in this gel cap.

Titi: Yeah, it's just like the whole like organic thing where you could put the word organic on a label if you meet certain criteria. But I think that a lot of people don't know what the criteria is. So you think, Oh, this means that it's good for me, but it doesn't always mean that it's good for you. Like organic sugar, you can't eat a pound of organic sugar and think that's like having a carrot. It's not.

Zakiya: And I think this gets us to this next question of like, if I have to consider all of these different things, is it safe? Is it regulated? Is actually what these people are saying It is? Is it worth getting into these different trending superfoods, the supplements?

Dr. Alice Lichstein: Currently, when we make dietary recommendations, we're asking people to focus on the whole dietary pattern all the foods and beverages that are consumed in a day, not individual nutrients and not individual foods.

Titi: I think what happens what a lot of us fall victim to is that people are looking for a magic pill or one thing that's just going to make it all better. And the way these products are being marketed kind of speaks to that. But according to Dr. Lichtenstein, the most important thing you can do is stick to a consistent diet that covers the basics.

Dr. Alice Lichstein: If we are eating a diet that's high in fruits and vegetables, it means we're not eating other things, and you don't know if the effect is due to what you're eating or what it's replacing from the diet. But the best data is for the whole dietary pattern. There's no one food that's going to make it or break it. It's the whole gamisch all put together.

Zakiya: This is really a good point, because I think it's tempting for us to want to take a supplement in lieu of eating lots of leafy green vegetables. Well, not me. You know, I love kale,

Titi: My friend is up to our eyeballs in kale.

Zakiya: And it's easier and quicker and more convenient to get those vitamins in the form of a pill, right? But if you're taking a pill, you may be omitting certain food groups and fiber. You're losing that and phytochemicals like we mentioned before, and you could be unintentionally creating another gap while you're trying to bulk up on whatever you could have gotten from the leafy greens.

Titi: Right? My friend, she sends me pictures of these beautiful salads. I still have them in my phone. At one point, I had it as my background on my phone. They were so beautiful and so colorful, just like Dr. Lichtenstein was saying. And so me, I don't really eat salad but if I take a vitamin because I'm like, OK, I'm not eating this kale salad like my friend Zakiya, I'm going to take this vitamin. Zakiya also has tomatoes in there, she might have some nuts, she might have some berries and some cheese. So she's getting a really well-balanced meal. And me, I'm just taking this one pill and getting, you know, a few of the vitamins. So she's getting way more because she has a more diverse plate.

Zakiya: But don't be fooled is not off a lot of time. If you are in my stories is you see what it really is. Another thing Dr. Lichtenstein explained to us is nutrient fortification, which is when the nutrients are added back into a food during processing to maintain or improve the nutritional value.

Dr. Alice Lichstenstein: Fluid milk always has vitamin D. if we buy the low fat or fat free. It also has added vitamin A. That's because when the fats taken out the vitamin A is taken out. So just put back up to the normal levels. We should be consuming mostly wholegrain products. However, if we do consumed enriched grain products legally, they have to contain thiamin, niacin, riboflavin, folate and iron, and that includes wheat. So that would be white flour and anything made with white flour. And it includes cornmeal and it includes white rice.

Zakiya: I think I'm going to start saying this is the best thing since sliced whole grain bread. Going to really make that distinction.

Titi: Yeah. The darker the bread, the sweeter the nutrients.

Zakiya: We're really fortunate that we have a lot of foods on the market that allow you to adapt depending on whatever your nutritional needs are. So if you need low fat or you need nondairy or you need

Titi: gluten free

Zakiya: gluten-free or you need more fiber, there are different food combinations like that.

Titi: There are a lot of options, but not every person has access to every option. Ideally, everyone would be able to get these vitamins and other nutrients from their diets. But what we

know is there are so many factors that go into somebody's diet, things like income, the price point of these foods, the location of stores, time to cook and then dietary needs and allergies.

Dr. Alice Lichstenstein: Sometimes it can be difficult to get the components of a healthy diet because we live in food deserts. However, if there is a demand, usually regardless of who the purveyor is in that area, they will meet the demand because it means that they're going to sell more product. But it has to be something that's done in partnership. On a larger scale we have seen more of it because we do see more, let's say, whole grain bread options and cracker options and pasta options. And that's because people are buying it. But I think we also have to work with policymakers to see how we can make better options in terms of purchasing food and having healthier options readily available. So one does not have to go out of their way in order to get it.

Zakiya: It is not just access to healthy options. We also need more education about nutrition and the right food pyramid starting from when we're young.

Dr. Alice Lichstenstein: If we want the current generation to develop into adults that can make healthy choices and have basic cooking skills. Then we have to provide it to them.

Titi: So if you have young kids, maybe start talking to them about different kinds of food and where they come from.

Zakiya: After the holiday season, I've seen those kids with their little cooking sets and they are serving the different foods up and baby, the children are our future, OK? I saw a play pizza and it had mushrooms and olives on it. Every play pizza I ever saw growing up was cheese or had pepperoni. There was never any vegetables. OK, so I have hope for the children.

Titi: All right, it's time for one thing. Zakiya, what's your one thing this week?

Zakiya: My one thing this week is something that's been good to me. If you follow me on Instagram, you've seen me using these, but I've also been able to share this with our producer, Jenny, and the doors to the cookware church are open. I really enjoy my nonstick pans. They are nonstick, all clad pans. They're making beautiful eggs just sliding right on off the pan. And I want that for everybody. I want you to stop scraping half your egg off the bottom of your pan. Jenny is a believer. I've converted her. She has a Calphalon pan and I just want us all as we think about this New Year, New You series to really allow your eggs and other things that you're cooking to be great in the kitchen, I'm going to link those in the show notes.

Titi: That sounds amazing, and I will be clicking that link.

Zakiya: What's your one thing this week?

Titi: So my one thing this week is actually a course, that past guest expert that we've had on two labs, Dr. Rupali Limaye. I'm sure a lot of you remember that name. She is doing a course through the Johns Hopkins University Bloomberg School for Public Health. And it's a course titled COVID Vaccine Ambassador Training: How to Talk to Parents. It's free. You can take this course and you should learn how to respond to misinformation, how to listen actively, how to

communicate and how to communicate public health policy. So it's about two hours. It's beginner level, it's 100 percent free, it's 100 percent online. And I think that it's an amazing tool to have in your toolkit. You get a certificate at the end and it can arm with the things that you need to be able to have really productive conversations about COVID and COVID 19 vaccination.

Zakiya: Nice. Nice.

Titi: The link will be in the show notes, so make sure you check it out there. Our credits this week are being read by one of our listeners, Alexandra.

Alexandra: That's it for Lab 048. Call Dope Labs at 202-567-7028 and tell Titi and Zakiya what you thought or give them an idea for a lab they should do this semester. Titi and Zakiya really love hearing from you. That's 202-567-7028. And don't forget, there's so much more for you to dig into on the website. There will be a cheat sheet for today's lab, additional links and resources in the show notes. Plus, you can sign up for the newsletter. Check it out at [Doat Labs podcast.com](http://DoatLabsPodcast.com)! Special thanks to today's guest expert, Dr. Alice Lichtenstein. Find more of Dr. Lichtenstein's work on Twitter at @jmhnrc. And you can find Dope Labs on Twitter and Instagram @Dopelabspodcast. Titi is on twitter @dr_tsho and you can find Zakiya @zsaidso. Dope Labs is a Spotify original production from MegaOhm Media Group. Producers are Jenny Radelet Mast and Lydia Smith of Wave Runner Studios. Editing and sound designed by Rob Smierciak. Mixing by Hannis Brown. Original music composed and produced by Taka Yasuzawa and Alex Sugiura. From Spotify our executive producer is Gina Delvac and creative producers is Candace Manriquez Wrenn. Special thanks to Shirley Ramos, Yasmeen Afifi, Kimu Elolia, Teal Kratky and Brian Marquis. Executive producers from MegaOhm media group, are Titi Shodiya and Zakiya Whatley.