[00:00:00] **Melissa:** Hello. And welcome back to the sound bites podcast. Today's episode is about ultra processed foods. This buzzword has been increasingly cited in the media, and there's been a dramatic increase in research on ultra processed foods in the past few years. But what are ultra processed foods? Are they causing obesity and chronic diseases like diabetes and heart disease?

[00:00:26] Are we eating more of them than ever before? Should we be avoiding them, all of those questions and more will be answered. My guest today is Dr. Mark. Messina. Dr. Mark Messina has a PhD in nutrition. He has been focused on soy and soybean components for the past 32 years. He's currently director of nutrition science, and research at the soy nutrition Institute global.

[00:00:52] And he's an adjunct associate professor with Loma Linda university. Welcome to the show Dr. Messina. Well, welcome back. I should say you are on episode number 148, talking about a soy research update, cancer allergies, and protein. It's a very popular episode and I encourage people to check it out and you can get one free continuing education unit.

[00:01:15] If you are a dietician, Diet technician or certified diabetes care and education specialist. And speaking of that, we are submitting this episode today for continuing education. So stay tuned for that and check out my CEU page. I currently have over 30 free CU activities available@soundbitesalready.com slash free CEUs.

[00:01:38] So Dr. Messina, please tell our listeners more about yourself and your background and. If they want to take a deeper dive again, they can go back and listen to 148. But for the purposes of our conversation today would love to hear more about the work that you do and how the soy guy quote unquote got interested in ultra processed foods.

[00:01:57] **Mark:** That's my favorite topic talking about myself, I guess. You know, as you mentioned, I've been in the field for about 32 years. I have a PhD in nutrition. I also have a master's degree in nutrition and after graduating, I began working for the NIH. Uh, specifically the national cancer Institute became interested in soy foods.

[00:02:18] And since about 1990, I've really focused entirely on soy foods and soybean components. So I spend most of my time writing and reading about, soy, and also speaking about, soy I am doing interviews like.

[00:02:32] **Melissa:** Excellent and fun fact, your wife's a dietician. So we talked about that back in episode 1 48. Now I recently did an episode on processed food, which had been wanting to do for a really long time.

[00:02:45] And that's also a very popular episode, episode number 1 98, if anyone's interested. Ever since then, I've been wanting to do an episode on ultra processed foods to kind of continue the conversation. And coincidentally, I recently saw you present on this topic, so I'm really excited to have you back on the podcast while our focus is on ultra processed foods as a soy foods expert, you're going to be speaking to soy foods and using those as examples.

[00:03:13] But if you want to kind of help me, um, in our listeners, make the connection as to, you know, why is the soy foods guy talking about ultra processed?

[00:03:21] **Mark:** Yeah, I'd be happy to do that. And it's surprising to me that I'm actually talking about this topic because I haven't focused on processing or ultra processed foods until about one year ago.

[00:03:34] And that's because there's a connection between the ultra processed foods and some of the more commonly consumed soy foods. So only provide a little bit of background. The term ultra processed foods was actually coined in 2009. So if you look at the world scientific literature, you actually don't see any papers published on ultra processed foods before 2009.

[00:03:56] And since that time, the research has exploded. The term ultra processed food was coined by Brazilian researchers who developed or created a new food classification system called nova. It's not an acronym. It doesn't really stand for anything. It does mean new in a Portuguese, perhaps. That's why they chose that word.

[00:04:18] So they came up with a food classification system based entirely on the extent to which foods are processed. Now, there are a lot of food classification systems out there, and these are designed to be a guide for consumers. A simple way that consumers can help identify foods that are

healthy from foods that are less healthy, but without exception, those existing food classification systems are really just based on nutrient content.

[00:04:51] So if a food has desirable nutrients like calcium and protein and fiber The food receives a higher score. If it has less desirable nutrients, such as sodium or saturated fat that receives a lower score until you do some calculations to come up with one number, some of these systems are based on like a five-star rating with five star being the best one star being the least healthy food.

[00:05:16] But again, they've all been based on nutrient content. In contrast this Nova food classification system is based on the extent to which a food is processed. The foods that are most processed are these ultra processed foods, the least processed foods, which are categorized as group one foods are the minimally processed foods.

[00:05:36] So a minimally processed food would be a fruit or a vegetable. It actually also is a meat and cows milk because those are largely unprocessed foods. And over the past, 10 years. There has been quite a bit of research looking at the relationship between the consumption of ultra processed foods and a variety of health outcomes and what you see almost without exception.

[00:06:03] And it's really not surprising is that the more ultra processed foods you consume, the worst, the health outcomes are. So you see ultra processed food intake being linked with Everything from obesity to cancer, to cardiovascular disease. And the reason that I say it's not surprising is because when you look at the nutrient content of many ultra processed foods, it's not very impressive.

[00:06:32] These foods are often high in sugar and fat and not very nutrient dense and very calorically dense. So there's a debate within the scientific community about the extent to which the nutrient content of an ultra processed food is responsible for these adverse outcomes. Some people think it's entirely due to the poor nutrient content of these foods.

[00:06:58] Other people think there's something else going on because ultra processed foods are foods that are typically made or include food additives. They could be flavor enhancers, they could be preservative. There are also foods that are often comprised of extracts of different foods. So you might have

a food that contains a concentrated source of protein, perhaps whey or soy protein.

[00:07:23] And that would qualify that food as an ultra processed food. And some argue that it's more than just nutrient content, that accounts for these adverse health outcomes.

[00:07:32] **Melissa:** Hmm. Okay. There's a lot for us to dive into there, but I do want to say, you know, as a former supermarket dietician, I was pretty familiar with a lot of the different food rating systems.

[00:07:43] I had never heard of Nova in, like you said, it's fairly new.

Mark: 2009

Melissa: Okay. So it was interesting because. At face value when you're saying, yeah, if it's got more nutrients, it gets a higher rating. If it has, I should say the nutrients that you want to consume more of it gets a higher rating of it has more fat calories, sodium, the things that you want to decrease.

[00:08:07] It, it gets a lower rating.

[00:08:09] **Mark:** That's true for the non Nova food classification systems for Nova. That's not the case at all. It's just entirely based on processing. And that, in my opinion is the problem with Nova. Right.

[00:08:22] **Melissa:** Okay. And that's what I was going to ask you more about because even Nova aside, these other rating systems, it sounds pretty straight forward.

[00:08:30] But with every single rating system that I was familiar with there were Flaws things that just didn't make sense. Whereas like a diet soda might rate higher than actually a food that provides nutrition because maybe that nutrient rich food had a little bit more fat or sugar in it or something. Tell me more about Nova.

[00:08:50] You said it's strictly based on that processing level. It doesn't take anything else into consideration?

[00:08:56] **Mark:** No it doesn’t but you make a really good point. These systems all have limitations because they're designed to be simple. For purposes

of helping to guide the consumer. So there are cases where a food that you and I might consider to be relatively healthy, has a low score and vice versa.

[00:09:18] And I think these systems continue to be refined. So Tufts university came out with the food compass score, which I think is a very good system. And it actually looks at 54 different attributes of food And Tufts university just rated 8,000 foods and you can actually download these foods free of charge. Now what's interesting about the food compass score is that many of the ultra processed foods as classified by Nova actually score very high.

[00:09:54] And so that points out that the Nova food classification system is not very nuanced. So, you know, I give this example, oftentimes if you take milk and fruit and make it into a smoothie, that would be a minimally processed food. But if you add a concentrated source of protein to that smoothie, it actually becomes an ultra processed food.

[00:10:19] Even though I think both of us would agree that the smoothie with the protein is a better. Then the smoothie without one. So I think the Nova food classification system is really just too simplistic and does a disservice to consumers in many ways. Of course nutritionists recommend as much as possible consuming, minimally processed foods.

[00:10:42] I mean, that's something that we all endorse, but one of the leading authorities in this field actually analyzed the diets of individuals. We found that it was very difficult to meet nutrient needs. If you only consume minimally processed foods or if you only consumed ultra processed foods. So what he found was that you needed a combination of minimally processed foods and ultra processed foods to actually meet all of your nutrient requirement because many ultra processed foods are fortified with a variety of vitamins and minerals, and many of these.

[00:11:22] Vitamins and minerals are shortfall nutrients. These are nutrients that we typically do not consume sufficient amounts on. So I think ultra processed food to have a role in the diet. And the reason I got interested in this field in the first place is because. The plant milks in general. So Oak milk, pea milk, soy milk, and the plant meats, whether they're made from wheat or pea or soy are generally classified as ultra processed foods.

[00:11:54] And I think that is scientifically unjustified,

[00:11:58] **Melissa:** right? So, you know, I talk about nutrient rich foods on every episode. I'm sure that comes up, uh, because for me. Trying to simplify things, but not oversimplify things. I always want to just, let's take a step back, you know, whatever the marketing or the labeling says on the food, whether it says it's free from or excellent source of this, or actually that's a good one.

[00:12:23] Um, or, you know, whether it says it's processed or ultra processed, or these terms we Throw about natural . Let's look and see how much nutrition does this food provide. How many of these nutrients, like you said, these shortfall nutrients or the nutrients to encourage, um, nutrients of concern versus the things that we, you know, we want to limit or not be excessive in Calories.

[00:12:45] Sodium fat, saturated, fat sugar. How much nutrition is that food providing? And for me, that kind of just levels the playing field and keeps our eye on the prize. And I think these terms, you know, whether something's processed or ultra processed, shouldn't the deciding factor be? Is it somewhat of an empty calorie food or is it more nutrient rich?

[00:13:08] But I think you're going to share at least some preliminary insights as to what you alluded to earlier, that it might be a little bit more nuanced than that, but I don't know if you want to react to what I just said.

[00:13:22] **Mark:** So I don't disagree with. Because in the end, I do think the nutrient content should be the determining factor regarding the healthfulness of the food.

[00:13:35] And as I mentioned before, that's how most existing food classifications judge foods. And so I do think it's difficult for many consumers to be able to on their own, look at the nutrient content of the food to determine whether. It is a healthy food or less healthy food. And that's why these food classifiation systems, I think can be useful because it may put it on a five point scale and, you know, the more points, the higher, the quality of the food.

[00:14:06] So I think they are very useful. But the Nova system thinks that you also have to take into consideration. For example, whether a product has an emulsifier or a food additive as part of the makeup. And that would typically not be part of most food classification systems because the Noga proponents would argue.

[00:14:30] Number one, that some of these food additives may be harmful and others might suggest that simply. Degrading the food matrix in of itself can have

health consequences. So for example, even if you look at something like corn on the cob versus canned corn, they're going to have relatively similar nutrient content, but the act of Chewing

[00:14:55] Itself may actually cause some physiological changes that could have a more or less desirable effect on how you handle that particular food. Or if you are looking at the sugar content of a food to determine whether that food is going to affect your blood glucose levels. If the sugar is part of the food and its natural state

[00:15:21] It may have a different effect from a food that contains the same amount of sugar, but the sugar is not part of the food matrix. And so I do think that we have to at least consider the possibility that we have to look at more than just the nutrient content of a food. You know, the other issue that goes along with that is that there are, as you well know, non nutrients in foods, these are often referred to as phytochemicals that can have an effect on our health.

[00:15:53] And these are often not considered in these existing food classification systems. And when you consume whole foods, especially whole plant foods, you tend to get a lot of these potentially beneficial phytochemicals plant chemicals.

[00:16:08] **Melissa:** So sometimes called phytonutrients, right? Yep. You, so we know that there's been a lot more research on ultra processed foods.

[00:16:15] especially since the term came about in 2009, because that term wouldn't have existed before then. Um, but can you tell us a little bit about what the research shows beyond maybe what you've already indicated?

[00:16:26] **Mark:** Well, first of all, a lot of our calories come from ultra processed foods. Well, over 50% in this country, and that's true of many developed countries around the world.

[00:16:36] So I think that's probably not a good thing. I mean, as we said before, generally speaking, you want most of your diet to be in the minimally processed or unprocessed forms. Now I have nothing against processing because you know, there are degrees of processing and it's important to appreciate that because processing.

[00:16:54] Involves heat. I mean, heat is a form of processing and heat can inactivate anti-nutrients that are naturally found in plant foods. And some cases,

the processing such as fermentation can actually create beneficial compounds that aren't in the unfermented food itself. So it's all about the degree of processing.

[00:17:18] And as I said before, why I got interested or became interested in this area of research is because I've been focused on soy for the past 30 some years and these plant meats. Soy meats and most soy milks are classified as ultra processed. So if the Nova food classification systems continues to be embraced and it's embraced by the FAO and WHO and a number of countries around the world have it as part of its their dietary guidelines, the Nova food classification may discourage people from consuming these foods, which I think are quite helpful and also compare well

[00:17:59] When you look at them versus their animal-based counterparts. So if you compare, soy milk with cows milk. Or a soy burger with a hamburger. And so I think in this case, the Nova food classification system does a real disservice to some foods.

[00:18:17] **Melissa:** Right. Right now, just real quick, you mentioned anti-nutrients uh, so for people who aren't listening, could you just explain that real quick?

[00:18:24] Yeah,

[00:18:24] **Mark:** sure. Anti-nutrients are found both in animal foods and plant foods, although for the most part they're associated with plant foods. Uh, because the plant oftentimes synthesize these compounds as a defense against predators, and they're also a storage form of some nutrients. So if you consider phytate also referred to as phytic acid.

[00:18:47] That is a storage form of phosphorus in plants, but phytate in plants also binds minerals. So it inhibits the absorption of minerals, such as iron and calcium. There are also compounds called protease inhibitors. These compounds inhibit the activity of enzymes that we need to digest proteins. So many plants are very high in these.

[00:19:15] Anti-nutrients but as a result of processing, we can eat those foods and they're very healthy for us. And in fact, some of the compounds that have been historically classified as anti-nutrients actually are thought to have some

beneficial effects. So I mentioned phytate inhibits Mineral absorption. It's also an antioxidant.

[00:19:39] Some of the protease inhibitors have been shown to inhibit cancer, in different, experimental models. So I think all the points out is that, you know, food is very complex. It's hard to simplify things. We should focus as much as possible on minimally processed foods. But you know, these processed foods are very convenient.

[00:20:01] They have a long shelf life, which I think is very important for food waste and food loss. Also, they are often very economical and that's an important issue for food security.

[00:20:16] **Melissa:** Absolutely. Yeah. And we, and we get into more about the importance of, and benefits of food processing or processed foods. Well, I should just say the food processing in episode 1 98.

[00:20:26] So encourage people to check that out. Um, but what else can you tell us about the ultra processed foods research and perhaps maybe some consumer insights? I know that there was a recent IFIC survey, international food information council that had some interesting insights as well. Yeah. Well,

[00:20:44] **Mark:** generally speaking.

[00:20:47] people have a relatively negative view of the term processed foods, aside from even ultra processed foods. If you do a Google search, looking at junk foods, processed foods and ultra processed foods, you come up with pretty much the same images. And I think it's understandable because over the years processed foods has sort of come to mean junk foods.

[00:21:14] So if you think of. Processing. I mentioned corn on the cob versus canned corn. And then the next step would be corn chips. And I think most people despite whether they enjoy them or not, would consider corn chips to be a highly processed food and ultra processed food. And one that you would only consume occasionally as opposed to corn on the cob, uh, which you could consume as much as you wanted.

[00:21:39] So again, it's important to consider the nuance that processing is really an important component to our food system. It's absolutely essential. And I mentioned before that as a result of processing, we're able to get a lot of our

nutrients that are not naturally found in those foods. Maybe the best example is actually cows milk.

[00:22:04] I think oftentimes consumers don't realize that cows milk is actually fortified with vitamin D. It's not naturally present. And vitamin D is a short fall nutrient. And if you're living in, you know, the climate yeah, Massachusetts, you're not going to be going outside very much. And most people have relatively low levels, the serum levels of vitamin D.

[00:22:28] So you get that from fortified soy milk, for example, and the soy milks are fortified with calcium as

[00:22:34] **Melissa:** well, right? Yes. And that's a great point. And that's what I've always thought of as well. It's sometimes it's, it's a long time coming with regard to some public health initiatives, but like folate in, you know, fortified in grains, breads and grains.

[00:22:51] Um, that was something that. You know, has helped significantly reduce the incidents of neural tube defects.

[00:22:57] **Mark:** Absolutely. An iodine. That's another really good when you think of the harmful effects of iodine deficiency, and most of us get our iodine from iodized salt. So these are all examples of processing that are just very beneficial for society.

[00:23:15] You know, others would say, well, there's processing and then there's ultra processed. And I appreciate the difference between the two. It's just that, as I mentioned, a lot of ultra processed foods actually score quite high. And even if you think of some of the oils, the seed oils, like soybean oil, corn oil, in most systems, they score quite high because they're high in polyunsaturated fat, the type of fat that lowers blood cholesterol.

[00:23:42] Whereas the Nova food classification system rates them very poorly in contrast lard or butter is actually rated very high in the Nova classification because they're less processed. That's right. But it's loaded with saturated fat, right? I think in some respects Nova's been helpful because it's forced the nutrition community to consider in greater detail, the effects both good and bad of processing.

[00:24:11] And so one of the things I did along with several of my colleagues is published well, it's not quite published yet, but hopefully it will be within the

next several weeks. We actually compared soy milk with cows milk and. Soy burgers with hamburgers. And we went through some of the concerns that have been raised about ultra processed foods to see if they apply more to the soy products than they did to their animal-based counterparts and what we found without exception

[00:24:40] Was, it was not the case. So one of the really big concerns about ultra processed foods is that they're hyper palatable and you know, the old advertisement for potato chips, you can't just eat one or even jello. There's always room for jello. I mean, we all know that once you get into a bag of some snack foods, that that bag is toast.

[00:25:00] I mean, you're just going to go right through it. So I think hyper palatability is an issue and the food industry does add flavorings to foods and additives that are designed specifically to improve the taste of that food after all they're in the business to make food that tastes good. So I, you know, you can't really fault them for that.

[00:25:23] There are a lot of these issues, but when we went through the soy meat versus the hamburger and the cows milk versus the soymilk. We found that none of these concerns about ultra processed foods actually applied to the soy-based products. That's really what got me interested. I hate to see someone not eat a soy burger or drink.

[00:25:43] Soy milk simply because they heard that they were classified as ultra processed foods by the Nova food classification system.

[00:25:53] **Melissa:** Right. Could you expand a little bit on this research in this paper coming out, uh, was this perceptions of consumers or was this a trial? I'm confused on the methods.

[00:26:03] **Mark:** Yeah. And I'd be happy to do that.

[00:26:04] And I, your confusion is understandable. I didn't do a very good job explaining it. So it was a review paper, some of the studies we looked at were clinical trials and some were consumer surveys. So for example, not surveys, but looking at consumer taste preferences. So for the hyper palatability question, we looked at data that compared to soy burger with a hamburger or a cow's milk with soy milk.

[00:26:32] And we found there was no evidence to suggest that the soy products were hyper palatable in that they were more likely to be consumed in excess than the animal based counterpart, we also looked at the effects of soy milk and cows milk on blood sugar levels. So those were clinical trials, no difference whatsoever between the two.

[00:26:56] So, um, we looked at chewing time because the faster you can eat something. The greater, the likelihood is that you're going to over consume it. And so I am a really fast eater and my wife is always telling me to slow down and, you know, there are a lot of fast eaters out there and it takes a while for your senses to kick in so that you would actually register that you're full.

[00:27:21] So it's good to eat foods a little bit more slowly. And when you break the food matrix, To be easier to consume foods very quickly. So you think about the time it might take to eat an apple versus how long it would take to drink apple juice? The juice would go down much more quickly. So when we looked at all these different attributes, we even looked at a study that compared the chewing time of a chicken product, actual animal based with a soy-based chicken.

[00:27:53] And the time it took to chew five grams was no different between the two products. So I think this paper will make a contribution to the literature because it points out that simply because Nova classifies a food as in one way, doesn't mean that it can't make a contribution to the diet. The other issue is that some of the ultra processed foods are thought to be bad for the environment because of the packaging involved

[00:28:18] And that is an issue. I think we all agree that there's too much packaging, not only for foods, but a lot of the products that we buy, but again, it doesn't apply more to the soy products than it would to cow's milk or hamburger.

[00:28:30] **Melissa:** Right. Right. Okay. So, so the hyper palatability and this information that you're sharing regarding this, uh, research that you did is that also speaking to the energy intake rate that you were talking about in your presentation,

[00:28:42] **Mark:** Yeah that seems to be a really important one.

[00:28:45] And it was highlighted by a study published in 2019 by Hall and colleagues who are internationally recognized obesity researchers. And they

actually help put the Nova food classification system on the map because they set out to determine how an ultra processed food diet would affect health in comparison to a diet based entirely on unprocessed foods.

[00:29:11] So he actually had volunteers that were in a metabolic ward, so they knew everything that they were eating and they could eat as much food as they want. For two weeks, they consumed an ultra processed foods. And for two weeks, they consumed a minimally processed food diet and what they found much to their surprise.

[00:29:29] And they acknowledged that in their research paper is that when the participants were consuming, the ultra processed food diet, they actually gained a little bit of weight. And it was just over a two week period when they consume the unprocessed food diet, they lost a little bit of weight. And the difference between the two

[00:29:47] results were statistically significant, which means that it likely did not occur by chance. So in other words, the evidence was suggesting that the ultra processed foods may have contributed to weight gain, but what they also acknowledged in the paper is that the ultra processed foods were more energy dense.

[00:30:06] They had more calories per gram. You could also eat those foods more quickly. So if you can eat the ultra processed foods more quickly and they have more calories per amount of food, you're going to be able to consume more calories. And that's exactly what happened. Participants consumed about 500 calories more per day when they were consuming the ultra processed food diet.

[00:30:32] But again, it's not that surprising because the ultra processed foods were consumed more quickly and they were more energy dense. And that's exactly what you would expect

[00:30:42] **Melissa:** Right and if they're consuming more total calories, you would expect them to gain weight.

[00:30:46] **Mark:** That's that's what happened. But the study is being cited as evidence that ultra processed foods can contribute to obesity.

[00:30:55] And that might be the case. I mean, of course as you know Obesity is a complex issue and multi-factorial, there are many reasons for why so many of

us are overweight and obese, but then if you get back to the soy versus animal comparison, you can't drink soy milk more quickly than cows milk, right? And the same thing for the burgers and the energy density, the number of calories per gram is actually lower.

[00:31:21] in the soy milks and the soy burgers. So again, those criticisms of multi-process foods don't apply to these soy products

[00:31:29] **Melissa:** right? So with that energy and take rate, these hyper palatable ultra processed foods, uh, there, it's just easier to unknowingly get more calories when you're choosing those

[00:31:43] **Mark:** that's right. And it has to do with satiety, the feelings of fullness.

[00:31:48] As I said before, the more quickly you can eat foods and if they're more energy dense, it's interesting. You think about any food. If you go back to that. Corn on the cob, canned corn. I mean, you can eat a heck of a lot of calories in corn chips, you know, much more so than corn on the cob. And if you don't put butter on or, you know, some sort of oil and corn on the cob, you're probably not going eat that much to be in with, but the corn chips have flavorings and they're high in sodium, which it's an attribute that characteristic of food that people enjoy.

[00:32:17] So a lot of this is not very surprising. It's just that the Nova classification system is just too simplistic and it categorizes a lot of Healthful foods as being unhealthy and that's just not good for the country. Sure. This is the

[00:32:30] **Melissa:** age old problem that we have a nutrition is simplifying things, but not oversimplifying them because that's not helpful.

[00:32:36] Um, so yeah, it sounds like there's a lot of interesting, uh, research and focus on this and it's even more complex than just look at the nutrition, like I always say, so it was very interesting. Is there any thing that you can share with us as far as takeaways for everybody listening, whether they're the average consumer or whether they're a healthcare professional, trying to help patients or clients or other insights or information you wanted to

[00:33:02] **Mark:** share just in general.

[00:33:04] I agree with your general perspective, which is that, you know, nutrient content is important and as much as possible you want to consume. Foods that are not extensively processed and that's, you know, whole grains, legumes, fruits, and vegetables, et cetera. It's nuts, seeds, but simply because a food is processed.

[00:33:28] Does not mean you should not consume it. So if you like beans and you don't have enough time to actually cook dry beans by all means, have a can of beans. And they're pretty darn healthy source of fiber. Great source of protein.

[00:33:44] **Melissa:** Yeah. And also just a quick little side note. If you rinse the beans, you can reduce the sodium content by 40%.

[00:33:51] **Mark:** That's great because I did not know that. I taught you something. Yeah. You know, they have potassium and folate, so they're really under utilized source of nutrition in our country. Absolutely. And so I do think processing is a consideration, but it's only one factor when you're looking at the healthfulness of the

[00:34:12] **Melissa:** food.

[00:34:12] Absolutely. And, and I say this a lot, but I want to really put a finer point on it. People say, oh, well, you know, clean labels, short ingredients lists, you know, those long ingredients list foods. I say no, no, no, no. That does not necessarily mean that it's not nutrient rich or it doesn't provide a lot of good nutrition.

[00:34:30] And I think some soy foods would fall into that. They might have a longer ingredients list and that's okay. Take a step back and look at the nutrition.

[00:34:38] **Mark:** Let me, let me give you an amen on that one. And I'm really glad you brought that up before we ended, because I have actually seen. Some soy products criticized for their long ingredient list.

[00:34:49] And the reason the ingredient list was long was because they had vitamins and minerals added to it. I mean, that's just Uh, it may work well in the form of marketing, but it's really quite dishonest. So ingredient lists really has nothing to do with the quality of the food itself.

[00:35:08] **Melissa:** Yeah. I did a podcast interview with Kris Sollid from IFIC the international food information council, where we talked about consumer perceptions and insights about.

[00:35:18] Um, short ingredients list, long ingredients lists. I can't remember what number that is, but I'll link to it in my show notes if anybody's interested, but it's really too bad that a lot of people have that perception. Um, you and I can shout it from the rooftops. Like that's not necessarily an indicator that it's not nutritious.

[00:35:35] Any other takeaways or final thoughts as we're wrapping up.

[00:35:40] **Mark:** Well, since you referred to me as the soy guy early on, I'll just give a plug for soy foods. I think soy can make an important contribution to an overall healthy diet. And, you know, try to consume two servings per day, but one is better than none.

[00:35:55] And because there are such a wide variety of foods that can be made from soy beans from the traditional Asian soy foods, you know, miso, tempeh, tofu, soymilk to the modern soy foods, like, soy burgers and soy nuts. And then there's edamame - the green soy beans. It's easy to incorporate some soy into the diet

[00:36:15] **Melissa:** and I know for more information about soy foods, soy health and nutrition research, people can go to the soy nutrition Institute or SNI global website, their Facebook, Twitter, and LinkedIn I'll have those links in my show notes, but the website is SNIglobal.org, I believe.

[00:36:34] Is that correct? Okay. Great. And then maybe you could provide me some links to include in the show notes where people can find out more about the research that you've talked about and the Nova system and all things ultra processed, uh, that we've touched on.

[00:36:50] **Mark:** Sure. I will do that.

[00:36:51] **Melissa:** Okay, great. Well, thank you so much for coming back on the show.

[00:36:55] It's been a pleasure talking with you and learning more about this really interesting buzzword ultraprocessed. Thanks for the invite. My pleasure.

And for everybody listening as always enjoy your food with health in mind till next time.