

Plant-Based Diet

KAITLIN HENNESSY: Hello, everyone, and welcome to the plant-based diet. My name is Kaitlin Hennessy. I'm the program coordinator here at Global Connections. And our Global Connections is to provide engaging co- and extracurricular activities for Global Campus students, anybody having an internet connection.

And we're delighted that you joined us this evening. Presenting tonight's program will be Alice Ma. She's a registered dietician here at WSU Dining Services. And throughout the evening, as many of you are already doing, please do use that chat box to discuss content. You can submit questions for Alice at any point. She will be breaking for a formal Q&A a few times during the presentation. But I'll be sure to take note of your question, no matter when you post it.

And if you have any technical difficulties, please do let me know, and I'll do my best to help you. I will be your event's moderator in the chat throughout the evening. OK. I'm going to turn it over to Alice now. Thank you for coming.

ALICE MA: Today, we're going to talk about a plant-based diet. I'm very excited, because it's my second webinar through the Global Campus program. The first one I did back in October, and this topic, particularly, is something that I'm very passionate about. So I'm excited to share that all with you.

So just a little bit about me first. My name's Alice. I'm a registered dietician. So what that credential means is that I've gone through an accredited program, a master's program, and completed a number of internship hours, and as well as taking the exam to become a registered dietician. So unlike the term nutritionist, the term nutritionist doesn't really have the same regulation or requirements in this country.

And so the preferred term is registered dietician. I grew up in West Jordan, Utah, close to Salt Lake City, so I ended up going to the University of Utah for my undergrad, and then a master's in nutrition and dietetics. And then I spent about a year over in central Washington, then moved over here in 2015.

And I currently work for dieting services here at WSU, as their dietician. And most of what I do revolves around menu planning, recipe development, working with students with special dietary needs. And one of the biggest trends we've seen in the past couple of years is the request for more plant-based options in the dining centers, either from students who are fully vegetarian or vegan, or students who generally just want to eat less meat.

And so this is a topic I'm very familiar with. I personally have also been plant-based-- I call myself vegan-- for about a little over three years now. So this is a topic I love. So for just a little overview of what I'm going to talk about today, and share with you all today is, why plant

based? So the whys and the whats, the definition of plant based, and why many people are going plant based, for a number of reasons.

And then secondly, I'm going to address some common myths and concerns when it comes to getting enough nutrition on a plant-based diet, specifically. The first question you often hear when you tell people you're vegetarian or vegan, is how much protein you get.

And then my favorite part will be talking about cooking techniques, and giving you a lot of recipe ideas and references, and blogs, to find your own recipes on how to replace protein, how to replace eggs and milk, and still come up with delicious food at the end. And I've got a lot of pictures that I've taken of the food I've eaten, both in the dining centers, as well as food I've made at home.

So lots of great pictures, and then I'll add, because there's a lot of things to cover, I'll also bring in some additional resources for nutrition information, recipe blogs, and then we'll do questions to draw out, as well as have some time at the end for questions.

So let's start with the definition of plant-based diet. What does the word plant based mean? And there really isn't a standard definition that I found online. It's one of those things where you interpret it on your own, based on what your philosophy is, and what your definition of a healthy diet is. I pulled a few from the internet. Kaitlin, if you can, will plug in the links for those.

The first one is from a blog called The Happy Herbivore, a great blog. I see some people have read it before, but great blog for recipes, as well as just general information on going plant based. But a person, according to her, a person following a plant-based diet eats only plant foods, but you'll see, in parentheses, she also mentioned, or mostly plant food.

So it's not really necessarily an all or nothing thing. It's basically, most of your diet is plant based, but maybe occasionally, you'll eat meat or dairy, maybe on vacation, maybe on holidays. It's a little bit flexible in that way. So it's more of a spectrum as opposed to a black and white thing. There's definitely some gray area there.

The second definition, this is a little bit more specific to the health aspect of it. It's from The Huffington Post, and they referred to it as a whole foods plant-based diet, as opposed to just a plant-based diet. One that's based on whole foods is just that. It's based on foods that are in their whole form, as opposed to foods that are highly processed, or plant parts, and the emphasis is on health, so eating whole fruits and vegetables, lots of whole grains, staying away from animal products.

And they also put, again, in parentheses, or minimizing. So again, there's a gray area. It's not a complete black and white, all or nothing. There's some really good flexibility there. And then one question I often get is whether the plant-based diet is the same as being vegan, and in

some cases, yes. In some cases, no. It really depends on who you ask, and what their personal philosophy is.

With the term plant based, it really applies to just diet for the most part, so what you're eating, whereas veganism is really much more of a philosophy, focused on animals. So someone who's vegan may follow a mostly plant-based diet, but they also maybe will avoid buying leather. They may avoid honey and gelatin. They may purchase special shampoos or conditioners from companies that don't test on animals.

And so it's similar to being vegan, but they're not always interchangeable in some ways. And this picture is an example of that, illustrating that point. So this is a cinnamon roll that I got back in Salt Lake City from a vegan cinnamon roll place that just opened up back home, and they used these cookies, which are essentially vegan, because there's no animal products, but they're definitely not whole foods plant based because a lot of the ingredients in there are synthetically made. So they're not necessarily healthy, but they are still vegan because there are no animal products.

And then lastly, some people also use the term flexitarian or reducetarian, that's kind of the same idea as plant based, but a little bit more flexibility there. So they may eat plant based most days of the week, and have a little bit more flexibility for restaurants, or on holidays. Another term that's used sometimes is called reducetarian. Same concept, plant based, but not necessarily black and white, fully vegan or vegetarian.

So why are people plant based or eating less meat? And there are a number of benefits. and so there's no right or wrong reason to do it. It's really, if you're doing it, you'll see all these benefits. So first and foremost, we use the term plant based because it's centered around health. And so with the health aspect of it, generally speaking, a plant-based diet is going to be higher in fiber because you're most likely eating a lot more fruits, vegetables, beans, legumes, nuts, grains, and then also lower in saturated fat, because a lot of the saturated fat in our diet comes from meat.

And so just by eliminating meat, you're eliminating a lot of that saturated fat. And then lastly, there's no cholesterol in a 100% plant-based diet because cholesterol only comes from animal products. So when you're completely plant based, you're not consuming any cholesterol at all.

And then as far as studies go, there are several studies on plant-based diets and vegetarian/vegan diets, and the health outcomes of those, and generally speaking, people who are on a plant-based diet reduce their risk of diabetes, heart disease, and high blood pressure, as well as use this diet as a means to manage those, if they already have these conditions existing.

And the key thing with this to remember is, people who are even partially vegetarian or vegan or partially plant based, maybe two or three days of the week, also see those same benefits. The benefits increase as you go more plant based, but even if you are flexitarian or plant based

a couple of days of the week, you will see some improvements there, according to this research.

Secondly, we have the environment. And so I won't touch too much on this, but this is really the reason I became plant based. I'm more of a flexitarian in the first place, about six years ago, before becoming fully vegan about three years ago. And so there are a number of reasons why being plant based-- it's a little bit better for the environment.

One is greenhouse gas emissions. So beef production, especially, results in a high amount of greenhouse gas, especially methane emission into the air, as well as requires a lot of usage of water and land, a lot of natural resources, compared to beans, lentils, and other things like that, that require much fewer resources, emit very little greenhouse gas.

And we do things like, we talk about cutting showers shorter, or driving less, using our bike more, and those things do have a positive impact on our environment. But this impact is going to come from our diet. Next is a pretty easy one, our wallets. So some people eat less meat just to save money, and that's a very simple way to do it.

There are ways where, if you purchase a lot of plant-based cheese substitutes or meat substitutes, those can cost a little bit more, but generally speaking, if you're buying things like beans, lentils, peanut butter, and resorting to those things as your primary source of protein, and plant-based substitutes, because you can buy a lot of those in bulk, and you're eating more fruits and vegetables and spending less money on meat, you are, generally speaking, going to save some money going plant based, even if it's one day a week, one dinner a week.

And then lastly-- I touched a little bit on this before-- for the animals, pretty simple concept, eating less meat, the animals suffer less. All right, I'm going to pause for a second, just to make sure there are no questions before I go into the nutrition piece.

KAITLIN HENNESSY: Don't have any questions right now, Alice.

ALICE MA: OK, all right, no questions. So I'm going to dive a into nutrition. There are a couple of references that I'll show you at the end, as well as one, here at the beginning, about nutrition. So just as a general overview, it is possible to get all the nutrition you need on a fully plant-based diet, as long as it's carefully planned, and you're thinking about sources of protein and other things, and really just relying on whole foods.

So first, we have protein. So protein is important for-- I think you most commonly hear muscle building and beans, although protein also does serve other functions in our bodies, but are mostly for muscle building, especially as we are growing. In our teenager stage, we're still building up muscle, and then maintenance as we get older. In our 30s or 40s, we do start to lose a little bit of muscle every decade.

And then as we get a little bit older there, we do tend to lose a little bit more muscle, and it becomes a little bit more difficult to maintain muscle, if we're not getting enough protein. So as a general rule, the requirement protein is roughly, it's 0.4 to 0.5 grams of protein per pound of body weight.

So as a rough estimate, as a quick and easy way to estimate it is, take your weight and divide it by 2. And that would give you an approximation of how much protein you need per day in grams, keeping in mind that it does vary slightly based on-- men tend to require a little more protein. If you're a little bit older, you may require a little bit more. If you're a little bit more active, a tiny bit more, but that's a good basis to start off of, as far as an estimation.

And then protein foods, we do get protein from a variety of foods. So first of all, the foods that we consider a protein food would be soy, beans, lentils, nuts, seeds, and the handout that Kaitlin will link there in a minute includes a chart that lists a number of protein sources that are plant based.

And that website is generally a good resource for a bunch of nutrition information regarding plant-based diets. And I'll show that website at the end, as well. But we do have protein from a number of foods, not just the foods you would consider in the protein group, but also from whole grains. Things like oats and quinoa are probably about 11 to 12 grams of protein per cup.

And then we do also get protein, in trace amounts, from certain vegetables, so kale, spinach, potatoes, are also fairly high in protein, for vegetables. And in some cases, you will see meat and animal products do contain a little bit more protein than some of these products, but it doesn't necessarily mean we're not getting enough. If we're eating these products, it's just that the average American diet right now, which is centered on meat, includes a little bit more protein than we actually need.

So even though we may get a little bit less on a plant-based diet, it doesn't necessarily mean we're deficient. It's just that diets that are heavy on meats get more protein than they need, which, it's not necessary. Right. Next nutrients are calcium and Vitamin D.

So these are vital in a number of functions, but mostly with bone health, so preventing things like osteoporosis, reducing our risk for hip fractures. And these vitamins and minerals come into play because when we think of calcium and Vitamin D, on a diet, the word that comes up, that comes to mind, is generally dairy products.

And so when we're on a plant-based diet, there's no dairy involved, but there are other ways to get your calcium and Vitamin D. With both those, you will typically find those in non-dairy milks because non-dairy milks are made to be a replacement for dairy milk, and so they'll fortify, or add in, the calcium and Vitamin D.

And it does vary by brand, so make sure you check the label on those to see, but most of your recognizable brands will be fortified with calcium and Vitamin D, as well as some other nutrients I'll mention later on.

And then besides that, tofu is a good source of calcium. Some tofu brands are also fortified with Vitamin D. Leafy greens are a good source of calcium, so your kales and your spinach and your collard greens, molasses. I don't use that too much in my cooking, but that's a good source. Orange juice is typically fortified with calcium as well, because the Vitamin C in the orange juice actually helps us absorb the calcium a little bit better.

And then some brands of cereals, again, they'll typically fortify cereals with calcium and Vitamin D, especially cereals that are served to kids. And then, on another note, with Vitamin D, you won't see it on all these foods, but Vitamin D also comes from sunlight. So if we're getting enough sunlight in the summer months, that gives us Vitamin D. You can also find it in mushrooms, mushrooms that are created with UV lights, as well as some of these products, these fortified products, which typically have vitamin D added to them.

Next nutrient is iron. So iron plays an important role in preventing-- some of you may have heard the word anemia. So anemia is when we have low iron levels, and that makes us feel very fatigued and tired. And iron plays a role in that because iron is what carries the oxygen from our lungs, and it brings the oxygen to our cells to be used and turned into energy.

And so iron is very important. And we do get a lot of it from our meats, and so when we're taking that out, you have to be a little bit careful about getting enough of that to prevent anemia. But you do get it from a variety of plant-based sources, so again, with the leafy greens, the kale, the spinach. I talked about tofu; you may find tofu fortified with iron, and also includes calcium. Beans and lentils are a very good source of iron. Fortified cereals, again, they add the iron to it, molasses, again.

And then whole grains, especially quinoa, have a fair amount of iron, as well as nuts and dried fruits. So here we have pictured just some chickpeas here, [INAUDIBLE] sweet potato, and then here, this is a quinoa that I made for one of my classes that I teach through the local co-op. Quinoa is cooked in apple juice, so it gives it some Vitamin C, and it's sweeter, and then there's some dried fruit in there. So that'd be a good overall sort of iron, that's very absorbable because the Vitamin C from the apple juice helps us absorb the iron as well as the calcium.

Last nutrient I'm going to discuss, Vitamin B12. So this is a very interesting vitamin, because it plays a vital role in energy metabolism, as well as helping us form DNA, and make red blood cells. And the hard part with this is, Vitamin B12 is mostly found in our diets, in animal products, and it's very hard to find them in plant-based products unless they're fortified.

So fortified foods, you'll see-- I'll mention this item later-- but this is called nutritional yeast. And nutritional yeast is an inactive form of yeast that you can find in, typically if you have a store, you're going to be close to a store with a bulk section, you'll almost always have

nutritional yeast in either these smaller flakes or some larger granules, or you may find it in either the health foods organic section, in a shaker bottle, or in the Bob's Red Mill, if you're familiar with that brand, that little bag there.

And what it is is, it tastes very similar to cheese, and so people who are on a plant-based diet will use it to replace cheese, either just by sprinkling it on top of things, and adding a little bit more flavor, or combining it with other things like cashews to make cheese sauce, or combining it with almonds and pulsing it, to make a sort of a Parmesan cheese.

Some people, even if they're not plant based, it's pretty popular as a topping on popcorn, so popcorn with some oil and nutritional yeast to give it that cheesy flavor without actually adding cheese. And that's a very good source of B12. And then other source of B12 would be, again, your non-dairy milks. You'll see some that are fortified with B12 because non-dairy milks are marketed at those people who are plant based or dairy free, and can't get the B12 from elsewhere.

So they will fortify it because they know it can be a replacement for milk. Again with cereals, are fortified, and then any sort of plant-based or vegan convenience products. So if you buy any of the plant-based meats or frozen pizzas that are plant based, those typically have the B12 added, again, because they market it to a specific plant-based population, so they know that sources of B12 are kind of rare, and so they'll fortify those products with the B12.

And this is the one vitamin where, generally speaking, most dieticians will recommend that you supplement with it because, just to play on the safe side, because B12 deficiency can get pretty serious, as far as developing fatigue and anemia. And so just to be on the safe side, it's recommended that supplementing, depending on the dosage you choose, either once or twice a week, or a smaller dosage every single day.

And this is pretty simple to do because supplements for B12 are generally a little bit less expensive. And it's also very hard to overdose or overconsume B12 because it's a water-soluble vitamin. So any B12 that you don't use, it'll go right through you and you'll get rid of it. So there's really no risk of overdosing on B12. All right, we'll take another pause for questions.

KAITLIN HENNESSY: Yes, we do have a few questions. And I don't think that people will be able to hear me very well, so if you can repeat them, that would really help. The first one asks about do you deal with hunger after eating plant-based meals and still being hungry after you're done eating?

ALICE MA: Yeah. So that's one of those things where it depends a lot on what you're eating. It's really just a matter of eating enough protein at the meal. So make sure you're including some of those protein sources we talked about, beans, lentils, nuts, whole grains, and making sure you're combining those together.

So we talked about protein earlier, and if you look at the handout that we referenced earlier, it talks about complete proteins. So combining different sources of protein so that you get all the essential amino acids that make a complete protein, and then also just eating in volume. And then the tough part with being plant based is that initially, you do have to find that you are hungry, which at least from my experience, it's really just a matter of-- sorry, can you guys hear me? OK. So right, so hunger pains, sometimes it's a matter of getting used to eating more or eating more often, and then getting used to adding protein sources, and making sure you get those protein sources at each meal.

KAITLIN HENNESSY: The next question on, if you can repeat it, I'm hypoglycemic, and find that I don't feel the same on all plant based. I've tried proteins and I find that doesn't adequately [INAUDIBLE] sugar. Any other device?

ALICE MA: All right, so question was, if you're hypoglycemic on a plant-based diet, finding yourself not being able to sustain the energy, that's probably more of a question for a doctor because I'm not really sure the reasoning behind the hypoglycemia, but with most people who are hypoglycemic, it helps really to eat more often. So having more snacks available to prevent that blood sugar from going back down, and really, back to the protein issue, getting enough protein at those meals to keep you fuller, longer, and as well as more fiber to keep you fuller, longer.

KAITLIN HENNESSY: Thank you Alice. And the next question asks, is there any non-dairy milk brand you would suggest?

ALICE MA: Yes. So I'm pretty particular with my non-dairy milk. My favorite brand is absolutely going to be Silk. Sorry. The question was, the non-dairy milk, which non-dairy milk I would suggest, but yeah, Silk brand is my favorite, and they carry soy milk. They carry almond milk. I think they also do cashew milk and coconut milk, in a variety of flavors, and they do also have, in some sizes, a no-sugar-added version, so if you're looking for something that's unsweetened.

But they do also have vanilla and chocolate. That's my favorite brand. Some people also like-- I think the other popular brand is So Delicious, which I'm not a fan of, but some people do like. There's also one newer brand called Good Karma, and that is a flax-based milk. So if you have allergies to soy or almond and those other typical plant-based milk, they do also have flaxseed milk available as the newcomer brand.

And that's allergen friendly, and all those brands also make things like non-dairy yogurt, and some of them also make non-dairy ice cream and coffee creamer. So there's a variety of products out there to replace dairy.

KAITLIN HENNESSY: That's all the questions we have right now. Thank you, Alice.

ALICE MA: All right. So this is the fun part. This is my favorite part of the presentation, is where I show you the food and talk about how I made it, and different ways to replace things like milk and eggs and protein when we're cooking.

With protein, I talked about protein before, and there are a number of foods we can use to replace meat and other sources of protein. One of them, I list first beans and lentils. And I list that because it's an allergen-friendly way to replace protein if you're allergic to any of the other ones, so nuts or wheats or soy/tofu. Beans and lentils are very allergen friendly.

And here on this bottom left picture, this is the recipe that Kaitlin will link here. It's a cranberry bean meatball, and I tried this-- what was this, about two weeks ago-- and it's probably the meatiest, I would say, meatball that I've tried to make.

So it's made of black beans, and then to give it more texture, it's mixed with oats, and then a little bit of flaxseed, or you can use nuts. And then to flavor it, there's cranberry sauce and then barbecue sauce over it, and also some Liquid Smoke, to give it a little bit of smoky flavor.

So it's probably one of my favorite recipes now. And it's very simple. It takes about 20 to 25 minutes to bake, and very inexpensive too, so a great plant-based recipe.

I've also used beans and lentils to make meat loaf so something like this over here. I usually make a garbanzo bean loaf, so using chickpeas or garbanzo beans mixed with brown rice or oats, and then tomato sauce, and then baked just like a meat loaf. You can do the same thing with lentils, and also use these beans for-- I use them to make dessert sometimes. So I puree them to make cookie dough. I've done a number of things with beans and lentils [INAUDIBLE] amount.

So they're a very good protein source to used in a variety of things. And secondly would be nuts, so nuts, obviously not appropriate for those with allergies, but nuts are used sometimes, as simple as peanut butter sandwiches, or if you want to get creative, nuts can be used to make pie crusts, so mixing nuts with dates. Mix a date into raw pie crust, or I've also seen things online that it's like a taco meat, but instead of using meat, they use walnuts, so walnuts mixed with a number of spices, and pulsed just barely so it resembles taco meat. So it's not pureed, or like a walnut butter, but it's almost crumbly like taco meat would be.

And then seitan, which is a wheat-based meat substitute, and that can be purchased as a convenience product, or you can buy something called vital wheat gluten in the bulk section, and that's what I used to make these ribs here, the barbeque ribs, and I used vital wheat gluten. And then I think with some vegetable broth, and then onion powder, garlic powder, and then Liquid Smoke, and then barbecue sauce, just like you would with barbeque ribs. And the texture is very similar to what I remember barbeque ribs to be.

And then tempeh is a soy-based product. You can get it as granules to use to make like Sloppy Joe. That's what we do on campus here. Or you can get them as strips. They sell tempeh bacon, and they sell tempeh strips that you can marinate just like you would meat.

And then tofu, similarly, you can buy tofu and marinate it, just like you would meat, and grill it, just like you would meat, or bake it, make it crispy. There are a variety of things-- I'll mention tofu a little bit later on-- as an egg substitute too, but tofu can be used in a number of ways. And then lastly, whole grains.

So whole grains can be used as a substitute because they do contain protein. In this picture here, on the top right, this is something we use on campus. So it's a quinoa, again, taco meat, quote unquote "meat." All we do is cook the quinoa, and I season it just like taco meat, and it resembles almost like the texture of ground beef, because it's very fine and granulated.

All right. So next, we have milk and cheese. And this is probably, personally for me, the easiest one to give up because I've been lactose intolerant pretty much since I was 18, or at least I knew I was lactose intolerant since I was 18. For some, milk and cheese is very hard to give up.

For milk, their substitution is pretty simple. We mentioned non-dairy milks earlier. So there are a variety of those available, soy, nut, flax, hemp, coconut, rice, oat, quite a few, depending on what your preferences are. And if you have any allergies, I personally like soy milk. It's a little bit higher in protein than most other non-dairy milks, so I do prefer it with the taste and with the extra protein.

But I also like nut milk. And again, be aware of added sugar with some of these because some brands, the only variety available is a sweetened variety. Things like rice and oat milk tend to be highly sweetened, and don't have a lot of nutrition in them, and protein in them. But soy, I like, flax and nuts, I like a lot as well.

And it's just a one-to-one replacement. So when you're baking, or making oatmeal or cereal, a simple swap, milk for non-dairy milk, when you're cooking or baking. And then nutritional yeast, we discussed earlier. So as a replacement for cheese, you can replace it just as a sprinkling on things, on pasta, or combining it with cashews.

I didn't link this recipe, but if you want it, I can definitely send it to you or show it to you later. This is a cashew-based cheese from one of my favorite blogs that I'll reference later on. That's just cashews that are soaked, and then blended together to make creamy, and then adding nutritional yeast to give it that cheesy color and taste.

But if you are allergic to nuts, another recipe for cheese that can be used to make mac and cheese is this other one that I have a link for coming up. It's a cheese sauce, but the basis is allergen friendly. So it's potatoes and carrots that are boiled and then blended together to become creamy.

And then after that, nutritional yeast is added. And then, I think this one has garlic powder, probably a little bit of turmeric you'll see in some recipes. Blend it together and then add it to cooked macaroni to make a cheesy mac and cheese.

And it's not quite as creamy as the cashew cheese would, because cashew adds a lot of fatty texture, but it is still a pretty good basis for a cheese sauce. It's just potatoes and carrots. And that recipe should be in this list of links for the sweet potato-- or for the potato and carrot cheese sauce.

Great. And then, as far as the hardest-- probably, the one that was hardest for me to give up was eggs. So with eggs, there are a number of things you could do. One would be using-- if you're talking about eggs that we use for breakfast, like scrambled eggs, one would be using tofu.

And my favorite-- I think, if I had to pick my favorite recipe blog-- is this one coming up. It's called Minimalist Baker. And I have a link in the handout. That's a scrambled tofu recipe, so it's a southwest tofu scramble. And it uses tofu that's just broken up.

And then, they add nutritional yeast, add a little bit of turmeric. And then, because tofu is very bland and it absorbs flavors pretty well, you can add whatever spices you want to give it a little bit more flavor. And then, it's just broken up into pieces so resembles almost like a scrambled egg texture. So that's a good replacer for some people for scrambled eggs and for breakfast.

You could also use silken tofu, which is a different type of tofu. It just has more water in it and so it's a little bit softer. And this isn't the best picture, but it's a quiche I made using silken tofu as just the base. And there's a recipe in the links, as well, for this one. And the crust here, I think was potatoes-- just potatoes and some vegan butter.

And then, the last one I recommend for people who are allergic to soy is chickpea flour. So chickpea flour, it can be a little bit hard to come by in some areas. I find it in the bulk section at the co-op I live next to.

But you can also find it typically, either in a health food section, or if there's an organic section, or a whole foods section in your store. Bob's Red Mill is another brand-- a pretty popular brand-- that they sell it in their little tiny bags. And you can find it, probably, next to all of the specialty fours if you have a section like that in your grocery store or you could get it online.

And you can also find it if you have an Indian grocery store where you live. It's also called besan, so B-E-S-A-N. So you see that in an Indian grocery store, that the same as chickpea flour.

And it can be used-- there's a link in the handout that uses chickpea flour to make these frittatas here, or there's another link that uses them to make omelets. So it's just the chickpea flour, and water, and I think nutritional yeast in there to give it some cheesy flavor. And then, it looks just like an omelet when you put it in a pan and cook it.

And if you want to add a little bit more extra eggy flavor, there is something called black salt that you can find, again, in Indian grocery stores or online. It's either called black salt or the Indian name for it is-- I'm probably going to butcher this but-- kala namak. So it's K-A-L-A-- I think it's M-A-L-A-K, but it's black salt. And you would replace any sort of salt in the recipe with just this black salt. And it adds the sulfuric taste that eggs have and it makes it taste exactly like eggs.

All right, my personal favorite section is the dessert section. And you can approach this one or two ways. So one approach would be to take a recipe that you already have that you like and replace the milk, and eggs, and the non-plant-based items ingredients with some sort of substitute. And one of the handouts that I included as part of this presentation includes a list that I put together of typical substitutes that you can use for butter, and milk, and eggs. And I posted something in this PowerPoint slide here.

But for butter, you can use-- usually when baking, replace butter with oil. Unless it's something that really requires a fatty, solid butter taste, oil works for the most case. My favorite replacement with chocolate recipes is to use an equal volume of mashed avocado, because avocado is solid at room temperature, just like butter is.

And it typically only works well with chocolate recipes because the chocolate will mask the color of the avocado as well as the taste. But 1:1 ratio-- 1 cup of butter is the same as 1 cup of mashed avocado. And you use it just like you would butter in your baking recipe.

In this recipe here-- this is something I made up on my own-- I took a recipe online that wasn't plant-based to begin with-- it called for butter-- and all I did was take out the butter and I replaced it with mashed avocado. And this is a no-bake recipe, so it's a fudge recipe. It's just avocado, cocoa powder, and peanut butter, and then maple syrup. And then, I threw some peanuts on top for garnish. So very simple no-bake vegan fudge recipe.

Applesauce also works pretty well as a butter replacement in baked goods. But it is a liquid, so it only works well in things that are baked. Not so well in things that would be no-bake, like this fudge.

And then, milk-- pretty simple. If you have a recipe that calls for milk, simply switching for nondairy milk-- any variety. I haven't really found that there's a difference between nondairy milks when you're using them in baked goods. And because of volume that's called for is typically like a cup, it doesn't really make a difference, nutritionally, to use any sort of focus, specifically, on one type. It's whatever you have on hand.

And then, eggs-- there are a number of things to use eggs for, or replace eggs with. The one I probably use the most is using flaxseeds. So taking ground flaxseeds-- so one tablespoon of the ground flaxseed, throwing it in 3 tablespoons of water, and then allowing that mixture to sit and gel for about 10 minutes.

And you can use with chia seeds as well. That seeds will absorb the liquid and it will form a almost gel-like substance after about 10 minutes. And that can be used to replace egg in any recipe. So that equals 1 egg.

And then, something that's very popular in the plant-based community now is something called aquafaba. So aquafaba is literally translated, aqua meaning water and then faba meaning bean. So it's bean water. And aquafaba is-- you can either get it from-- if you cook chickpeas or garbanzo beans from dried and have that cooking liquid left over, that's aquafaba. Or if you buy the canned version of beans, you can save that liquid that you typically would drain out and toss, and use that-- and that's aquafaba.

And so a tablespoon of that can replace an egg in a recipe. So it's just throwing it in to replace the egg and mixing as usual. And it mimics the same-- because there's a trace amount of protein in aquafaba, it has the same texture as an egg and it preforms the same binding function as an egg would in the baking recipe.

And then, little sidenote about aquafaba-- because it's big now, there are a number of cookbooks out there-- there are about, probably, three-- that are solely based on recipes that use aquafaba. So definitely look those up on Amazon. You can also use aquafaba to whip.

So if you whip it up with a little bit cream of tartar and maple syrup, it makes almost like a marshmallow fluff. Or you could use that same fluff to use as a frosting. Or you could even bake that fluff into meringues. Although it takes about two hours, it is possible to turn that into meringues. And that's all it is-- chickpea liquid, no egg whites, and sweetener for the most part.

So that's kind of the 1:1 replacement. You can also just look up recipes that already call for vegan plant-based ingredients. And that's another route to do it. But I like to replace stuff in recipes I already have and see what happens and experiment.

Then with ice cream, I'd say vegan ice cream is really hard to make on your own. You can make it with coconut milk, cashew milk, rice milk, soy milk, but it does often require an ice cream maker.

For an easy, no-fuss ice cream, I like to use bananas. So they call it banana nice cream because it's a nicer version of ice cream that is a lot healthier than your typical ice creams, either dairy or nondairy ice creams. And there's a link to the recipe-- a number of recipes-- in the handout there from one of my favorite dessert blogs called Chocolate Covered Katie. She focuses mostly on desserts, but she does have some savory things as well.

But banana nice cream is bananas that are just sliced up-- so peeled and sliced. And then, the banana slices are frozen on a cookie sheet. And then, after the bananas are frozen, they're blended in a food processor. Just pulse slightly, not quite blended so it's pureed, but blended just so it's creamy and not liquidy.

And then, you can blend that with whatever you have to flavor it. I did cocoa powder in this picture to make a chocolate ice cream. I've also done it with avocado to make it creamier. And then, I've added a little bit of spinach to make it greener. And then, I added peppermint extract make it like a mint chocolate banana nice cream.

And you can eat it right after you make it. It's more of a soft serve. Or if you refreeze it, it'll become pretty hard. It does harden pretty quickly. And so, if you end up freezing overnight after making it, it will take a little bit of time to thaw out to be soft enough to eat because it does freeze pretty hard.

And then, you can also buy-- again, I mentioned some of the brands earlier. Silk and So Delicious, they both make plant-based ice creams, usually made out of soy, and cashew milk, and coconut milk. You can also find rice milk ice cream, but that's not my favorite. It doesn't taste as great.

Depending on where you live, there is also a brand called Nadamoo that I like a lot. It's coconut milk makes ice cream there's also one called Cado-- C-A-D-O. It's an avocado-based ice cream, although they don't sell in my area, so I haven't tried it. If you live closer to the East Coast, you may be able to find it.

And then lastly, here, we have a cashew-based cheesecake. So there's a recipe for this from the same blog-- Chocolate Covered Katie-- in the handout. I wish I could say I made this, but this is actually from-- so about a month ago-- exactly a month ago, actually-- was my birthday. And so, our dieting services admin professional made me this cashew-based cheesecake instead of a regular cake for my birthday.

And it's just soaked cashews. So you can buy vegan cream cheese, but it's kind of expensive. So the inexpensive way to do it would be to take cashews, soak them to make them soft. And then, it's blended together with maple syrup-- sometimes, coconut oil or coconut cream to give it more of a solid texture-- and then, whatever flavorings-- you know, berries.

And that's put on, usually, a raw pie crust that's made of almonds and dates. And then, if you want it more solid, freeze that and it tastes just like cheesecake. There is also-- I forgot to mention-- lemon juice in this or sometimes apple cider vinegar. And that gives it that tart taste that a cheesecake usually has.

And then, I talked a little bit about these earlier, but if you're not really into cooking-- I know not everyone cooks and not everyone likes to cook, so there are a number of store-bought items to help you transition into going plant-based. For meats, I talked a little about-- so Gardein is the brand we use in the dining centers. This is a Korean beef.

And all we do is usually, replace the exact same recipe we have with meat, take out the meat, and replace it with the same Gardein product. So they sell chicken breast. They sell beef-less strips, fish fillets. I think they also do nuggets, a variety of things, burgers as well.

This brand down here is an up-and-coming brand called Beyond Meat. So they have this something called the Beyond Burger, which is a plant-based burger patty. But the idea was to mimic meat as close as possible, which isn't for everyone because some people are plant-based because they don't like the taste of meat. But if you are plant-based, and you do miss the taste of meat, this is something I recommend trying out because it does taste just like what I remember meat is. And there's also no allergens in this brand, so it's made of pea protein. So no soy or wheat like Gardein, so it's allergen friendly, which is nice for some people.

Dairy-free ice cream, we talked about. There's a variety of brands of those. Dairy-free cheeses-- we use a brand called Daiya at one of our pizza stations. The taste-- why people like it a lot. And also, pretty allergen friendly. It's not a nut base. It's coconut oil based.

And then, frozen pizzas, convenience meals-- a lot of similar brands. You can buy vegan eggs, too. There's a brand called Follow Your Heart that sells a vegan egg. Also, there's a brand called Ener-G. So Ener-G, without the Y-- E-N-E-R dash G-- egg replacer for baking.

You can buy plant-based butters-- Earth Balance or Smart Balance. And then, a variety of cookies, cake mixes, other sweet treats, so you don't have to bake from scratch. The one caution with this would be costs. So even though being plant-based, generally speaking, is a lot less expensive, if you are relying on a number of these faux meats or faux cheese substitutes, it can get pretty expensive.

And some of these are also pretty high in sodium-- like faux meats-- so be aware of that. But it is a good way to try new things. And if you're missing certain things in your diet, like meats and cheeses, it is fun to try out some of these things occasionally.

So lastly, just to get started, if you're fairly new to this idea of plant-based, it may be helpful instead of going all at once, to make small changes at a time. So maybe, going meatless once a week. Some people will participate in Meatless Mondays. Or being more of a flexitarian where you're not eating meat. Let's say, maybe you don't eat meat at home, but when you go out to restaurants, you'll eat meat.

Something we do in the dining centers is Less Meat Mondays. So on Mondays, all the burgers we serve are a blended burger that's made with 25% mushrooms and 75% beef. So it's not a vegetarian burger by any means, but it's a little bit of less meat. And so, it makes a little bit of impact as far as our environmental impact. And then also, it adds a bit more nutrition to the burger. So small things like that.

And there are a number of resources out there. I went to a variety of blogs in those past links. But these four resources are some of the best, as far as reputable resources that come from peer-reviewed research. If you're looking for specific research on nutrition and plant-based diets, this will give you pretty much everything you need.

The Vegetarian Resource Group includes things like meal plans, and sample meal plans, and list of items that have protein in them, list of foods that have calcium in them, a list of food additives that may have animals in them, books, and recipes.

And then, the next one is this Dietitian Practice Group. So this is a subgroup of the Professional Organization of Dietitians that's focused on vegetarian nutrition. And they address a lot of the common myths.

And they have a variety of consumer handouts that address, you know, can I get enough protein on a plant-based diet, should I feed my child plant-based, how do I get enough iron on a plant-based diet, or if I'm pregnant and I'm plant-based, can I still do that? A variety of those frequently asked questions when you're going plant-based and going through different life stages-- they've got a handout for many of those.

And then, two dietitians that are very famous and specifically focused on plant-based eating are The Vegan RD-- The Vegan Registered Dietitian-- and then, The Plant-Powered Dietitian. And both of these dietitians, typically, will write blogs on hot topics in plant-based eating or dispelling myths and addressing common concerns on plant-based eating.

And so that leaves me with a couple of minutes for questions. My email is there, as well as my Twitter, which I'm not super active on, but I'll tweet every now and then. If you have any additional questions, or want recipes that I had referenced to and maybe didn't include links for, or other ideas for eating out, or eating plant-based in general-- any other additional questions? I saw a couple. I didn't quite read through them all.

KAITLIN HENNESSY: Yes. So one question is do non-dairy yogurts still have good bacteria?

ALICE MA: Yes, so most brands of non-dairy yogurts, because of the way they're made, will still include those probiotics because they can typically source those from an animal-free source. So the one brand that comes to mind would be the Silk brand that I recently looked at, and they include probiotics in most of their yogurts.

KAITLIN HENNESSY: Thank you. Our next question asks, can you cover anti-nutrients and how to better absorb minerals?

ALICE MA: Yes, so anti-nutrients are-- at least, from what I'm understanding from the question and how they prevent mineral absorption-- are they're called-- they go under the name phytates sometimes. And so, let's take for example, kale. Kale contains calcium and iron.

But they also contain something called phytates, which prevent the absorption of calcium in iron, which is kind of counter-intuitive. But when you cook the kale down, it actually breaks down some of those phytates/anti-nutrients and makes the calcium and iron more absorbable.

So cooking things like beans, and kale, and spinach, breaks down those anti-nutrients and makes the minerals a little bit more easy to absorb. And the other way to make those minerals easier to absorb, with calcium and iron, is to have those foods with vitamin C. So if you're taking a calcium or eating a salad, making sure to have an apple with it for vitamin C or some oranges on the side to make it easier to absorb calcium and the iron.

KAITLIN HENNESSY: Thank you. The next question asks, I have tried going wheat-free and would like your opinion on the health benefits or if it's just a fad.

ALICE MA: So a little bit of both. Wheat-free is-- definitely, gluten-free for sure, not necessarily just wheat-free-- so gluten-free was definitely a fad a couple of years ago. It's starting to die down a little bit now. But there are people who do need to be gluten-free because they're a celiac or have some sort of intolerance.

And some people find that they don't feel great when they're eating wheat, especially large amounts of wheat. But really for the general population, if you aren't feeling any effects after eating wheat and you don't have a certain condition that makes wheat indigestible to you, there's really no additional benefit to being wheat-free.

KAITLIN HENNESSY: Thank you. Our next question asks, is coconut milk's full-fat dangerous because it's a saturated fat?

ALICE MA: So the question was is coconut milk dangerous because of the saturated fat? And that's a very hot topic right now in nutrition-- whether or not coconut oil and coconut milk, the saturated fat is the same as saturated fat from meats.

And really for the time being, I would say use coconut oil in moderation because it is still a saturated fat and we know for sure that saturated fat is related to higher cholesterol. So in moderation, for sure, with coconut oil. And then with coconut milk, it does still have the saturated fat if you use the canned coconut milk, which is usually the one you use for cooking. And that contains the fatty part of the coconut, which is the coconut cream.

But if you're using-- if you're talking about coconut milk that's in the gallon size container that's used for drinking, that coconut milk is typically a lot lower in saturated fat than the culinary coconut milk you would buy in a can. And you can also buy a light version of coconut milk that isn't have the full fat, but has a lot saturated fat removed.

KAITLIN HENNESSY: Thank you. Our next question-- what do you recommend if someone has GI issues that they experience when eating beans or legumes? And would combining dairy with lentils be a cause of discomfort or anything like that?

ALICE MA: Thanks, of course, for the questions in the comment box. So with beans and legumes, it is pretty common to have gas or bloating after eating them. And one tip is, really, if you're new with plant-based eating, is to go a little bit slower on those at first.

So starting with about a half a cup of beans and legumes is typically tolerable for people who are on what's called a low-FODMAP diet, and building up your tolerance from there. And then, the other one would be when you're cooking, if you're buying canned beans or legumes, being sure to rinse of them really, really well because that gets rid of a lot of the starch.

And then, if you're cooking them from scratch, being sure to soak them first, overnight. And then, in the morning, rinsing them after you soak them. And then, cooking them and then, again, rinsing them after you cook them.

I've also heard-- I haven't tried this before and I haven't really seen research-- but I've also heard adding bay leaf when you cook the beans reduced some of the [INAUDIBLE] the gas in there. Again, I haven't tried it, but I've heard that. And then, with the second question-- combining dairy with beans and lentils be a cause-- I wouldn't say combining it with the beans and lentils is the cause.

I think it might be the dairy itself being the cause of it. Because typically as we get older, we're not able to digest lactose as well. And I know especially as someone who's Asian-American, we tend not to digest lactose as well because we don't grow up eating it as much as typical people in America do. And so, that might be the primary underlying issue as opposed to the beans and lentils being the issue and combining those two.

KAITLIN HENNESSY: Thank you, Alice. And we have about two more questions that we'll wrap up because I think that was 7:30 and we want to be respectful of everyone's time. But the next question is, I don't [INAUDIBLE] is there an alternative for plant-based cheese [INAUDIBLE] that you mentioned?

ALICE MA: So with yeast, the nutritional yeast isn't an active form of yeast, so I'm not sure if that would pose the same-- I'm not really sure about your specific allergy. But nutritional yeast, because it's inactive, may be a little bit different from the yeast. It's very different because you can't really use it to bake bread. So it's a different form of yeast and it may not cause those some allergies as the bacteria-- the yeast you're talking about when it comes to baking bread with yeast.

But as an alternative, if you don't want to use any nutritional yeast, there are non-dairy cheeses you can buy that are coconut oil based that don't use nutritional yeast. Or simply replacing-- just leaving the nutritional yeast when you're using those same recipes and for color, adding turmeric. You won't get quite the same taste or flavor, but you can get the same color from using turmeric to add that yellowish color.

KAITLIN HENNESSY: Our next question asks, are vegan butters healthy in food substitutes, especially when we were discussing baking?

ALICE MA: It really depends on the brand. Some of them are still pretty high in saturated fat and they use palm oil, which isn't really sustainable. So they're not the healthiest substitutes,

but they are sometimes a little bit tolerable as far as not having dairy in them. And then, a little bit lower in fat, but again, I would use those in moderation.

KAITLIN HENNESSY: Thank you. And I have a question to ask, does eating plant-based cause increased bowel movement?

ALICE MA: At first, I would say, again, it's depending on where you are on a plant-based spectrum. It takes a while to really build up that tolerance to all the additional fiber. And so initially, you may experience that discomfort. And with the gas as well, initially, you'll experience that, but you can get yourself used to that and slowly build your way up there. And so, yes, at first, for sure. But at least for me, I got used to it over the years.

KAITLIN HENNESSY: And our last question asks, can you recommend a good source of plant-based recipes that would appeal to carnivores too?

ALICE MA: So some of the blogs I mentioned-- MinimalistBaker.com-- so she has a very approachable style. So she calls herself plant-based, but not necessarily vegan. And most of her recipes are geared towards people who are new to plant-based and just wanting something that looks great and mimics the meat and dairy counterparts of those recipes. So that's my favorite blog.

There's a number of good blogs out there. If you look at-- there's a website called FindingVegan.com, so Finding Vegan. And that is actually, a compilation of different blogs that submit their photos to the website for approval. And so there, you'll find a number of vegan recipes.

And I like searching through that because if I see a picture I like, I can just click on it and it'll take me to that blog. And usually, it's a blog. Sometimes, it's a blog that I've never seen before. So it's called FindingVegan.com.

And let me see if I can actually type that into the chat box. MinimalistBaker.com is one. And then, FindingVegan.com would be another one. I'm trying to think if there's anything else. There's a number of them, for sure.

YouTube channels are also good. I like a YouTube channel called Mary's Test Kitchen. I can't really link up there to the YouTube channel, but it's called Mary's Test Kitchen. I'll just type up the name here. If you go on YouTube and search it, you can find it there. She has a lot of great recipes. Yeah, I think that's all I can think of off the top of my head.