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MISTRAL: Welcome to the Talks at Google podcast, where great minds meet. I'm Mistral, bringing you this week's episode. Talks at Google brings the world's most influential thinkers, creators, makers, and doers all to one place. Every episode of this podcast is taken from a video that can be seen at youtube.com/talksatgoogle. In this episode, bodybuilder Nimai Delgado discusses how he used his mechanical engineering background to optimize his health by choosing the right fuel for optimal human performance and became an elite professional bodybuilder on a fully plant-based diet. What is most shocking is that Nimai has never eaten meat in his life. He was raised in a Hare Krishna farm community in Mississippi and describes how his unique childhood experiences shaped his perspective on life. Nimai has gone against the grain his entire life and learned some interesting lessons that we can all apply to increase health, performance, longevity, and benefit to the environment.

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Here's Nimai Delgado: How Eating Plants Changed My Life, and How It Can Change Yours.

NIMAI DELGADO: First of all, thank you, Bobby. The world-the word bodybuilder normally has certain connotations along with it, such as strength, power, muscle, masculine, and particularly immense physical strength. But I don't believe that strength is measured by how much muscle you have or the amount of weight you can lift. I measure strength by how resilient you are through times of adversity. I believe that strength should be measured by standing up for what you believe in, even if it makes the path to where you want to go that much more difficult. And most of all, I believe that strength should be measured by compassion. Most people seem to confuse passion--compassion for weakness.

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But I believe that compassion is the ultimate measure of a person's strength. My name is Nimai Delgado. I'm the first vegan male professional bodybuilder to compete in the IFBB, which is the world's most prestigious bodybuilding league. And last year I had the privilege of gracing the cover of Muscle and Fitness, to become first ever vegan, to promote a lifestyle--an alternative lifestyle that not only promotes health and longevity but also promotes compassion. And I've never had a piece of meat in my entire life. Now, some of you may be wondering: how can a person like myself, a professional bodybuilder, grow up and never have a single piece of meat in my life? Well, to understand that, you have to understand a little bit more about me and how I was raised. So, it all starts back with my parents, way down in South America, in Argentina. Whenever my parents were both in their early 20s, they converted from Catholicism to a new lifestyle of Hinduism.

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Now, they actually renounced all material possessions and decided to live a faith-based life and devoted themselves completely to God. And by doing this, they followed their spiritual master, their guru, from temple to temple, from Buenos Aires, Argentina, to Florianopolis, Brazil, to Miami, to New Orleans, and eventually making a home and settling in south Mississippi, where I was born. Now, as you can imagine, growing up in a Hare Krishna farm in south Mississippi was quite unique. You know, we had a cow sanctuary, where we accepted rescue cows from other farms, that provided milk for the community. We also had a self-sustaining garden, which provided vegetables and fruit for the community. There was

also a temple, where the surrounding members of the community would practice bhakti yoga, which is essentially devotional yoga.

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And I would frequent these temples, and I would, as you can see, dress in traditional Hindu garments. We would wear a tilaka, we would wear neck beads. And growing up this way was really quite unique, because I had quite a strong connection with animals in particularly. And I learned certain concepts growing up this lifestyle that I still follow today. And one of those concepts in Hinduism is something called ahimsa. Now, ahimsa is an ancient Sanskrit word that roughly translates into meaning non-violence. So, Hindus try to embody this in every way possible and in every aspect of their life, including the food that they put on their plate. So, essentially, it means showing compassion to all living beings, including animals. Because in order for an animal to end up on your plate, the animal had to suffer and the animal had to eventually die for your convenience. So, you could imagine, I grew up in this bubble and then had to assimilate outside of this bubble and go to public school.

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Now, my parents were very free thinkers. They didn't really care much about the outside world, and they sent me to my first day of kindergarten, head-to-toe, dressed in traditional Hindu garments, wearing neck beads, showing--wearing tilaka on my forehead, like I showed you in the picture earlier. And I quickly realized how different I was from everybody else. And not only did I quickly realize, the kids in my class quickly realized as well, and they let me know. So, growing up in south Mississippi as a Hare Krishna was very difficulty at times, because I can remember bringing my lunch in my lunchbox to the class, and opening up my lunchbox, and immediately filling the room with aromas of Indian cuisine, because that's what I was being fed at home. You know, things like curry, cumin, turmeric, all of these things that are very aromatic. And kids would immediately look at me, and they would look at the food that was eating, and they would begin to ask questions, like, "What is that? Why are you eating that food?"

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And, as a young child, it's very difficult to explain a concept like ahimsa to somebody that's unfamiliar with it. So what happened was that I constantly had to defend myself and explain my belief system growing up to kids that didn't necessarily understand, so much to the point where I got almost self-conscious about who I was as a person, and ended up becoming somewhat ashamed of my background and how I was raised, because I was so different than everybody else. So, when I would attend parties and birthday parties and different events at school, and the parents of the kids would ask me why aren't I eating the hamburgers or why am I not eating the pizza, I would simply just respond by saying, "I don't like it," because that was easier for me to say than, "I don't eat it because I don't believe in harming other living beings." So essentially, I just became somewhat--I suppressed who I was as a person.

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And this mentality followed me all the way up until college, where I went on to study to get my mechanical engineering degree in Louisiana. And what happened was, after I graduated from-from college in Louisiana, I had these big dreams and aspirations of coming to California and living the California lifestyle and longboarding along the beach in front of palm trees, but what happened was I

ended up moving to a place called Bakersfield, which--I don't know if many of you are familiar with Bakersfield. It's not too far from here. It's only about two and a half hours north. And Bakersfield is very similar to Louisiana and Mississippi, in the sense that it is a predominantly agriculturally-based town with loads of cattle farms, dairy farms. They also grow lots of crops in Bakersfield. And I, in particularly, went to work for an oil company, because oil is also heavily prevalent in Bakersfield.

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So my job, as a mechanical engineer, working for this oil company, was to essentially ensure that the pipelines, the tanks, and the vessels maintain their mechanical integrity, because whatever happens--when you extract these oils and liquids from the ground, they're highly corrosive, to metal in particular. So it was my job to assess these-these assets and make sure that they maintain their mechanical integrity. Now, while it was a very intellectually stimulating job and a very important job, because I was not only keeping the environment safe, I was keeping the coworkers of mine safe as well, it did not fulfill me in any sort of way, because I was deeply uninterested in what I was doing, in going to work every day, working for a corporate job. And this actually made me quite depressed, because I had achieved everything that I had ever wanted. You know, I had made it. I had graduated as an engineer. I had fulfilled my parents' dreams of giving me a better opportunity to provide for myself and my family, financially. And this made me very sad inside.

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And what happened after was--is that I found an escape through fitness. So, in Bakersfield, there isn't much to do. you either become very involved with partying and drinking, or you find other, more productive outlets. And I chose to spend my time more productively, working on myself and becoming the healthiest version of myself. Because what I had found, even looking at things as an engineer, is that everything can be broken down into systems and processes. And your body in particular is a very highly adaptive machine. So, if you can understand the processes and how your body works, you can optimize it the same way you can optimize what type of fuel you can put in a car to make it operate better, to prevent maintenance from--in the future. Now, in that discovery, what I started looking into was the type of foods that I was consuming. And by this time, I was very heavily focused in the gym. I was spending a lot of energy. And I was seeing some results.

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And as a vegetarian bodybuilder, I tended to follow a more traditional bro-science approach to building muscle, meaning that approximately 40 percent of my calories were coming from protein. Now, as a vegetarian, I tended to really heavily rely on things like whey protein, cottage cheese, and certain types of dairy products in order to meet my protein requirements. Now, along the same time, a video that my mom happened to share on Facebook surfaced in my news feed, and I looked into it. And it was showing what was going on in the dairy industry and at these dairy farms. Now, I had always grown up believing that it wasn't a real issue drinking milk and consuming dairy products, because in my mind I justified it by: the cows weren't dying to provide milk, so there isn't really anything wrong with it, right? But what this video exposed to me is the processes and the systems that these company use to extract product--milk from their product.

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And I looked at it with a different set of eyes than I normally had before, because working in the corporate world taught me how to look for efficiencies and make the profit margins for the company that I worked with higher. So, in this video, they showed exactly what goes on behind dairy industries. And yes, of course, there are, you know, many, I would say, unethical practices that go on in these practices, but what really caught my attention is the mechanical processes that goes on to extracting the milk from these cows. And I immediately related to it, because it looked very similar to a processing plant that I had worked in before. So, looking at this image with a set of engineering lenses, I understood that there was a guy that was exactly like me that was working for this company, trying hard and thinking really hard how to maximize efficiency from their systems and processes, at the expense of these living beings.

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And having no regard for whether or not they're suffering, whether or not they're comfortable. So, at that moment, I made the conscious decision that I wasn't gonna contribute my dollar to supporting these companies, because by me supporting these companies, essentially I was paying this guy's salary to work harder and smarter and create more suffering. And this all goes back to the word ahimsa, which basically means try to live a most compassionate life as possible. After this, you could imagine, as a-as a very enthusiastic bodybuilder, I became very concerned that I was giving up my primary source of protein. And I Googled--I Googled what are some of the concerns, or maybe health risks, of giving up dairy in particular? Because, you know, I've always heard that dairy was a primary source of calcium. It was also a primary source of protein, whey protein in particular.

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And what I found was quite astounding. So, immediately, one of the biggest statistics that jumped out at me was the fact that studies show that 65 percent of the world's population is intolerant to dairy. That doesn't necessarily mean they're allergic, but they show some type of intolerance. Now, this number drastically increases for people of Asian descent and particularly people of any kind of color descent. It goes up to the high 90s. Now, these intolerances don't show the same symptoms as, say, an allergy, in the way that your body will go into some type of anaphylactic shock and produce antibodies to fight these allergens. What happens is that these symptoms are much more subtle. Essentially, you could be suffering from an intolerance, not knowing it, and be experiencing things like chronic fatigue, chronic inflammation, digestive problems. And I was experiencing every single one of these things, given the fact that I was so predominantly dependent on dairy products for my protein.

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Not only that, but dairy, in particular--milk has been shown to increase estrogen in males by 26 percent within an hour of consumption. Now, as a bodybuilder, the last thing you want floating around in your body is more estrogen, because you can't produce muscle as good. So you want your testosterone levels to be as high as possible and managed your estrogen levels as closely as possible. Not only that, but what was shown was that increased estrogen levels also put you more at risk to certain types of cancers, particularly prostate cancer, and breast cancer in females. And this number was quite alarming to me, because eight out of ten men who reached the age of 80 develop some type of prostate cancer cells. Doesn't mean they're diagnosed with cancer, but they are at a much higher risk of developing cancer at the old age. Now, I mentioned earlier about inflammation and how dairy can cause inflammation.

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Well, it turns out there's a sugar molecule that's called Neu5Gc. And basically, this molecule is exclusively found in dairy and in meat products. So, by consuming this molecule, what happens is that your body recognizes this as a threat. So your body will start to produce antibodies, and these antibodies will cause your body to become in a chronic state of inflammation. And what happens when your body is chronically inflamed is that the amount of blood flow that your body is producing becomes greatly restricted. And, of course, if you are trying to get pumped in the gym and produce as much blood flow in your veins to shuttle all the nutrients and oxygen to your muscles to provide you power, to push you through those workouts, this is the last thing that you would want. So I was very intrigued. And by this point, I was already completely convinced that I had made the right decision. And what I found was that--what would happen if I replaced those dairy calories that I was normally getting with more plants.

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And the results were quite astounding. Basically, what happens is plant-based diets have been showed to decrease the risk of prostate cancer by up to 35 percent. Now, I don't know about you guys, but whenever I'm 80 years old, I want to be healthy, I want to be happy, and I definitely don't want to be dealing with something like prostate cancer. So this was a huge benefit for me. Not only that, but plants almost exclusively contain something called antioxidants. Now, antioxidants decrease the body's inflammatory state by basically binding themself to free radicals that are produced through oxidative processes in your system. So, they bind themselves and basically detoxify your system, thus increasing the amount of blood flow that you can have during exercises. Also, plants are rich in fiber, which decrease blood pressure and increase insulin sensitivity. And insulin is another hormone that is essentially--its purpose is to shuttle nutrients into the cells.

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So, when it comes to recovery, you definitely want this hormone to be fully active and shuttling as much nutrients for recovery and rebuilding as possible. Also, plants contain something called nitrates. Nitrates basically act as vasodilators, which dilate your blood vessels to allow for more blood flow to reach your muscles. And they increase the amount of oxygen utilization during exercise. So, one study even showed that simply by drinking beet root juice before exercise, maybe an hour or two before, can increase your performance by up to 20 percent. So, after I made this decision to completely give up dairy products, I had also made a commitment to compete in my very first bodybuilding show. I made it very difficult for myself, because, first of all, this was the first ever show that I had ever competed in, and I was a brand new vegan, and I had no idea how to structure a diet for a bodybuilding show.

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So I had to adapt what I was reading, what I was learning, and make it work for my body. And what happened was really quite amazing--is I only had about eight weeks to prepare, and lo and behold, I step on stage, and I win the entire contest. I sweep every single division, and took home a stupid amount of hardware. Now, what's interesting about winning a bodybuilding show is that immediately after you step off stage, people want to know what you did to get into that shape. So the question that I had been avoiding my entire life--the question of what do I eat?--now became the more frequently asked question to me. And I was put in a position where I had to talk about what I ate and how I was able to

achieve these results without following any type of traditional bodybuilding diet that contained eggs, whey protein, chicken, beef, or steak. And people became, immediately, really intrigued in what I was saying.

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So I thought to myself, why don't I share this journey online? And that's when I made the decision to start trying to educate people about an alternative approach to reaching these kind of results--but not only that, an alternative approach that also promoted health and longevity from the inside out. And not long after, I did another show, and I ended up winning the entire thing again. And then shortly after that, I earned my professional status. And kind of my bodybuilding career and my fitness career were paralleling in the same way, but my passion for bodybuilding was greatly exceeding my passion for engineering. And more opportunities began to present themselves. Like this one, in the form of public speaking. And I can remember, I gave this speech in London, and after giving the speech, a gentleman came up to me, and he was in tears, and he embraced me. And he goes, "Thank you so much." And I go, "For what?"

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And he goes, "You saved my mom's life." And I was really--I was really blown away by that. And I go, "How?" And he goes, "I found veganism and the plant-based lifestyle through you, and you made me believe that it was possible to be healthy. And through that process, I helped my mom transition to a vegan diet. And she was suffering from type 2 diabetes, so much so that she was unable to get out of bed. And after adopting a plant-based diet, she was able to almost reverse and manage her type 2 diabetes symptoms completely." And he fully believes that that helped save her life. So, whenever I came back to work, on Monday, I knew I had a decision to make. And I knew that I was--I wasn't spending my energy properly. And I knew that by sharing this information, it could not only help people, but it could also help somebody save their life. So I walked into my boss's office and I put in my two weeks resignation at that moment.

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And it was really quite a very fulfilling moment in my life, but also a very comical one, because he asked me--he said, Nimai, "What are you gonna do?" And I tried to explain to him what I was doing. And he goes, "So you're quitting engineering to become a vegan?" And I'll never forget it, but there--I believe that there is so much importance on sharing this message, and particularly to the bodybuilding and fitness community, because bodybuilders in general consume two to three times more protein than what they actually need. So this means that bodybuilders are at a much higher risk of developing these diseases later on in life. So, just to give you an idea of how much protein an average bodybuilder consumes--normally, if you go to any kind of bodybuilding website of read any kind of fitness magazine, they recommended to eat at least one to two grams of protein per pound of body weight.

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So, let's give a hypothetical example of this guy named Bob. So, Bob the bodybuilder, like me, weighs about 180 pounds. That would mean, by following that type of logic, you would have to get at least 180 to 360 grams of protein in order to build and sustain muscle. So, I started thinking: what kind of impact does this have on the world? And how many animals need to die in order to provide Bob this amount of

protein? So, I reverse calculated this figure, and let's just say, for simplicity's sake, that Bob only consumed chicken as his primary source of protein. So, he wanted to get 180 grams of protein from chicken. Now, one ounce of chicken has about six grams of protein, so that means he would need at least--on the low end, to get at least 30 ounces of chicken per day. Well, I looked up how much usable meat is in a full-grown chicken. And normally full-grown chickens weight about four pounds.

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After you remove the feathers and everything else that you don't eat, you're left with about two pounds of meat. So that means that Bob here requires one chicken per day in order to build his muscles. If you think about that for a second, what is--what does that many chickens look like? You know, if you would imagine 365 chickens in this room, how loud would it be? What would it sound like? What would it smell like? There's so much life with 365 living beings. And that's on a low end of the spectrum. Think about it. if he goes with the high end of the spectrum, that's almost 1,000 animals per year. Not only that, when I looked into the deeper information in regards to how much energy and resources it takes to feed these chickens, to get to that state--it takes roughly six times the amount of grains and plant protein in order to produce one gram of animal protein. You don't have to be an engineer to realize that's really inefficient. Right?

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Next, approximately 83 percent of agricultural land is used for livestock. And of that 83 percent, it only provides about 18 percent of the world's calories. Again, very inefficient. And just to give you an idea of how much resources it takes to raise these animals and raise the crops that feed these animals, one hamburger, in order for it to reach your plate, has about 660 gallons of embedded water to get there. Approximately 27 percent of the world's freshwater consumption is used to produce crops to feed the animals. In fact, along with these amazing statistics is that animal agriculture is approximately responsible for 18 percent of greenhouse gas emissions, according to the United Nations Food of Agriculture.

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That is approximately equivalent to all of the greenhouse gas emissions combined, such as all the automobiles, all the planes, all the trains, and all the ships, combined. Let that sink in. On the other hand, let's say you have a vegan bodybuilder. He requires zero animals per year, and he still achieves the exact same results. Not only that, but he cuts out the middleman and goes straight to the source and increases efficiency by up to six times. On top of that, he helps save over 400,000 gallons of water per year, simply by choosing to eliminate his meat and dairy consumption. And he reduces approximately 11,000 square feet of deforestation per year.

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Now, if you can imagine everybody in this room reducing their meat consumption, just the amount of profound effects it would have on the environmental impact around us. In fact, if everybody in the United States-in the United States, which happens to consume approximately three times more than the global average of meat consumption--if the United States shifted away from meat consumption to a plant-based diet, it would reduce agricultural emissions by 73 percent. Now, this all sounds nice in theory, and it sounds great, but the question that most-mostly everyone in this room must be

wondering is: "Okay, if I cut all this meat out and all this dairy, what the heck do I eat?" Right? This is one of the biggest challenges that I have as a vegan influencer--is to convince people that vegans don't just only eat lettuce. And I could tell you this million times, but I would rather just show you.

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So, foods that I typically like to eat consist of sushi, tacos, stir fry, sandwiches, sometimes all at the same time. Also, burritos. You've got pizza. I mean, the possibilities are absolutely endless, when it comes to plant-based foods, that are not only delicious but also very nutritionally rich as well. So, even different types of cuisine, like Thai food or Mediterranean--everything you see here is completely plant-based and free of any kind of dairy or animal products. As you can see, it looks quite delicious, and I'll vouch for you that it definitely was. So, you might have been looking at those meals and been wondering, since you cut out all of the-the dairy and the animal proteins, how much protein are in these meals, and is it enough to fully sustain a healthy lifestyle let alone build muscle?

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And this is another question that I get asked every single day at least a hundred times a day, and if I had a dollar for every time that somebody asked me this question, I would own by own island in the Caribbean with an avocado farm. What's ironic about this question is that most people who ask this question don't even know how much they need. So, the USDA actually recommends 46 to 56 grams of protein per day for your average sedentary person. To give you some perspective, three cups of cooked lentils gives you 54 grams of protein. That's approximately 100 percent of your daily recommended intake for protein. On top of that, another study showed that vegans in particular consume 70 percent more protein than they actually need. So there is no shortage of protein when it comes to a vegan diet. However, athletes are different, especially bodybuilders. They require a high amount of protein, because you are putting your body under an insane amount of metabolic stress. You are breaking your body down, and you need to regenerate and repair.

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So this requires protein. One of the largest meta-analysis that studied how much is optimal protein for trained individuals determined that 1.8 grams per kilogram, or 0.82 grams per pound, is the upper limit for protein consumption for building and sustaining muscle. That means that anything above 1.8 grams per kilogram did not show any more meaningful results, as far as building muscle or building strength. Just to give you an example of what that looks like--again, somebody like my size, that's 180 pounds, you would multiply 0.82 times your body weight, and you would get 148 grams per day. that would be your necessary--my necessary requirements for building and maintaining muscle. So, you might be thinking, you know, how easy is it to get 148--approximately 150 grams of protein per day? These are some of the meals that I typically eat.

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I actually created a separate Instagram account specifically where I could show people what I ate, because I got so many questions and DMs about protein concerns and everything else. So I said, why don't I just show you? So, as you can see, the meal on the left--it's a very simple meal. It just contains lentils, tofu, and greens. This meal on the left has 41 grams of protein. That's approximately 30 percent of my daily protein requirements, and approximately 100 percent of a regular person's requirements.

The meal on the right also contains tofu, oyster mushrooms, sweet potatoes, and kale. Again, 33 grams of protein. Almost 100 percent of the regular person's needs for protein. Now, if you want to go for more of a low-carb option, because plants do contain a lot of carbs, and there's a lot of phobias around consuming too many carbs, there are things like pasta that are made out of zucchinis. This meal also has approximately 30 grams of protein.

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And I also wanted to show how easy it is to structure a diet based off whatever fitness goal you have--so, whether you want to bulk or shred, how simple it is to adapt your plate to meet your fitness goals. For example, the meal on the left, it has mixed vegetables, white rice, and cooked lentils. The meal on the right simply replaces the white rice with more green vegetables, which you can eat in high amounts of volume and not really increase the amount of calories that you have, because they are very calorically--they are not very calorically dense, but they are very nutritionally dense. So, you can see both meals provide over 20 grams of protein. Now, you might be looking at some of these meals or some of the other meals that I posted and notice that they have things like tofu, which is made from soy. Now, soy has quite a lot of conflicting information about it. And there's a lot of phobia around consuming soy as well. One of the biggest misconceptions is that soy contains estrogen.

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Now, I just want to set the record clear: soy contains zero estrogen. What soy contains is something called phytoestrogens. Now, these phytoestrogens may have a similar molecular structure to estrogen. So what happens is they can actually bind to your estrogen receptor sites in your body and inhibit real estrogen from attaching to those receptor sites. And in turn, what happens is you lower your-your estrogen concentration in your body. And the way this happens is that, as we mentioned earlier, about, you know, drinking milk and increasing estrogen levels, it actually decreases the risk of certain types of cancers, like prostate and breast cancer. Other studies show that it does not affect testosterone or fertility at all. There has not been a single study that produced and published--that conclude that it affects testosterone in a negative way.

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Another big misconception is that all soy is GMO. Now, there is a wide variety of USDA organic soy products that are available at every single supermarket. And it's also important to consider that a large percent of the soy crops that are GMO are actually fed in animal feed. So, these animals are consuming high amounts of GMO soy, and then again, you get it secondhand through the animal whenever you consume that. So if you're trying to avoid soy, you're still getting it secondhand. So, the next biggest question is: "Can a vegan diet provide me with all the essential nutrients and vitamins that I need to be healthy and to thrive?" One of the most commonly talked about vitamin that vegans tend--or a vegan diet supposedly lacks is B12. Now, it's important to understand: what is B12?

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Vitamin B12 is a--it's a vitamin that's essential for optimal health. And the way it's produced is--it's commonly found by--is produced in bacteria and commonly found in soil and in natural water sources. Having low amount of vitamin b12 in your system can produce symptoms like fatigue, digestive issues, nerve issues, and even vision loss. So it's really an important vitamin. But this isn't a vegan problem. It's

actually a general population problem, because approximately 40 percent of the general population is low in B12. And there's a reason for this--is that we, as humans used to get B12 through eating trace amounts of soil that was on dirty or unwashed vegetables, and we would consume that, and that would be enough B12, or we would drink from natural water sources.

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But over time, through sanitary and agricultural farming techniques, the pesticides and everything that is used--they inhibit any kind of bacteria from forming or producing these B12 for these bacteria. So, in fact, some factory farm animals never even graze on soil. They never even see daylight. So they have to supplement these animals with B12. And a big misconception is that B12 is only found through animals, but the reality is that these animals are getting supplemented with B12, and then you get it secondhand by consuming the animal. So, a much more efficient way to get your B12 is to simply supplement it yourself. And although this may not seem like a-like a natural thing, to supplement a pill, well, it's important to realize that we don't live in such natural conditions anymore, and we've kind of created this problem, and it's important that we have to address it, because everybody should take a look at what their B12s are--what their B12 levels are and decide whether or not to supplement.

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The next thing to consider operating system omega-3 fatty acids. Now, fatty acids are optimal for brain health, for managing blood triglycerides, and also reducing inflammation. These-the most well known source of omega-3 fatty acids come from fish. So, you've heard, you know, fish are healthy for you. Take your fish oil supplements. And the problem with that is that fish in factory farming conditions--even for fish farms--they have high levels of heavy metals, because the world's ocean supply and water supply is so heavily contaminated with these heavy metals. And what happens is these fish eat other fish, and these heavy metals kind of concentrate, and they become more bio-accumulated and stored in the fat cells of fish. And they store other things too, like PCBs and other heavy metals.

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And what happens is these heavy metals, such as mercury--they can attack your system in many different ways, particularly your thyroid, which can have a great effect on how efficiently your metabolism operates. Now, an alternative source of omega-3 fatty acids comes from a wide variety of plants, such as algae, chia seeds, hemp seeds, flax seeds, walnuts, avocados, and Brussels sprouts. The difference is that the form of omega-3s found in these sources are what you call ALA. So, there's three different active types of omega-3 fatty acids, and our body has to convert ALA omega-3 fatty acids into a more active component, such as DHA and EPA, which are both very critical for optimal health. Now, this conversion process can be very inefficient, if your ratio of omega-6, which is a very highly inflammatory fatty acid, is too great to your omega-3 concentration.

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So, basically, you want to optimize your omega-6-to-omega-3 ratio so you can convert as much ALA to DHA and EPA. Now, foods that contain omega-6 are things that are highly processed, things that contain canola oil, palm oil--all of these things have really high amounts of omega-6, which not only affect your ability to convert ALA to DHA but also produce a highly inflammatory state in your body, which can, again, reduce blood flow. The next thing to consider is vitamin D. Now, vitamin D is essential for calcium

absorption and immune system support. Now, some light is needed for the body's ability to produce vitamin D. The problem is that not everybody goes out into the sunlight, or there might not be enough sunlight available, depending on which part of the world you live in, to get enough sunlight to produce vitamin D. And again, this is not a vegan issue. This is a worldwide issue.

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And studies show that a large population of the world is low or deficient in vitamin D. So again, it is just best to supplement. And what's ironic is that there's so many concerns about a vegan diet not being able to provide all the essential vitamins, minerals, and macronutrients. But according to the latest U.S. dietary guidelines, there are seven critical nutrients that most Americans aren't getting, such as calcium, potassium, fiber, magnesium, vitamin A, C, and E. And what's interesting is that these vitamins and minerals are found in abundance in a plant-based diet. Now, you might be thinking to yourself, "Okay, I'm convinced. I want to give this thing a try. How do I start?" So, these are a few tips that I suggest to--how to successfully transition into a plant-based lifestyle.

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Now, I've had many conversations and many interactions with people about how to make the most efficient transition into a plant-based diet that is sustainable, meaning it lasts you a lifetime. It's not a diet, it's a lifestyle change. Because what happens is, when most people try to go vegan and give up all these other products, they become overwhelmed ands they go back to what they were originally doing. So what I suggest is to slowly phase out animal products at your own pace. You can swap out dairy products for plant-based alternatives. There are million different plant-based alternatives, such as milk, butter, cheeses--you name it, they have it. the next thing would be to swap out one-for-one, like-for-like, meat-meat products with plant-based alternatives. You can still eat the exact same way that you eat now. Just replace real meat with a plant-based version of it. The next thing would be to just try to replace one meal with a vegan meal per day.

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And as you become more accustomed to the variety of different foods that you can eat, maybe try one vegan day per week, and then eventually one vegan week per month, and then one vegan month per year, and even eventually a fully transitioned plant-based lifestyle. There are also tons of resources out there available to you, if you have any concern about anything regarding a vegan lifestyle or nutrition--things such as veganfitness.com, which is a website that I started, along with my business partners, just so we can help educate athletes in particular about their concerns, and showing them that it's possible to reach their athletic goals and not sacrifice any performance at all. There are also things like nutriotionfacts.org, which is run by somebody named Dr. Michael Greger, who takes a look at almost every single medical journal and every single medical study that is published in regards to nutrition.

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There's also another organization called Switch4Good, which is an athlete-founded coalition of people who are educating people about the dairy industry and some of the benefits of giving that up. And there's also something called the Physician's Committee for Responsible Medicine, which is a coalition of medical professionals that are trying to bring awareness to the benefits of a plant-based lifestyle. Now, before I end this presentation, I would like to leave it with a question: by a show of hands, how many

people have lost a loved one due to a premature death that was somewhat lifestyle-related? Almost everyone. Now, if you had the opportunity to go back in time and share with them some information that could potentially save their life or add additional happy, healthy years to their life, would you share that information with them?

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Of course you would. So, that brings me to my next question: why wouldn't you implement this information for yourself, that way you can live a longer, healthier, happier life, and spend it with your loved ones? Because in reality, we have two homes: we have our body, and we have our planet. And it's imperative that we take care of both of them. My name is Nimai Delgado. Thank you very much.

MISTRAL: Thanks for listening. If you have any feedback on this or any other episode, we'd love to hear from you. You can visit g.co/talksatgoogle/podcastfeedback to leave your comments. To discover more amazing content, you can always find us online at youtube.com/talksatgoogle, on our website, google.com/talks, or via our Twitter handle, @googletalks. Talk soon.