Interview with Michelle McMacken, MD

Michelle McMacken, MD discusses the importance of nutrition and lifestyle, the best way to lose and manage weight, and why she recommends plant-based vegan diets.

Dr. McMacken is an honors graduate of Yale University and Columbia University College of Physicians and Surgeons, boardcertified internal medicine physician, assistant professor of medicine at NYU School of Medicine, and the director of the Bellevue Hospital Weight Management Clinic in New York City.

Some excellent articles written by Dr. McMacken can also be found here.

A short excerpt of the interview is above at the top of this post, and two more excerpts, the extended full interview (about 35 minutes), and transcript are below.

PART 2 OF THE INTERVIEW HIGHLIGHTS:

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EXTENDED FULL INTERVIEW:

Interview Transcript

DR. PINEDA OCHOA: Dr. McMacken, thank you so much for making time to meet with us.

DR. MCMACKEN: Oh, my pleasure, happy to be here.

DR. PINEDA OCHOA: So Dr. McMacken, tell us please a little bit about your background and about your training, what you do, what your interests are.

DR. MCMACKEN: Sure. So my background is — well, I was one of those English majors that never thought I would go to medical school, never took a science class, found myself working at the Centers for Disease Control in Atlanta as a writer/editor actually, and decided I wanted to go into public health. Took all my pre-med requirements and was fortunate enough to go to medical school here in New York at Columbia. And then I did my training in internal medicine — my residency training in internal medicine at Cornell.

I chose internal medicine because it's a field of medicine where you can really integrate all the systems – organ systems, mental health, social aspects of care. And so I really like that, and I love that dynamic and the way I interact with patients and the way it helps me do that. So after my training, my residency training, I went to NYU School of Medicine to join the faculty. And that's where I still am. It's been 12 years.

I work as an assistant professor teaching medical students and residents there. And my full-time clinical practice is at Bellevue Hospital, which is one of the country's oldest public hospitals. And it's a wonderful place, a lot of very missionoriented people, and just taking care of a very diverse group of patients and teaching at the same time.

So I have a primary care practice, which means I take care of a lot of chronic diseases, like diabetes and high blood pressure, cancer screening, heart disease, gout, Alzheimer's disease, kidney stones, high cholesterol, all of the things that are really quite epidemic in our country. And I also direct a weight loss clinic as part of my job, where I help people change their lifestyle to become healthier and lose weight.

DR. PINEDA OCHOA: That's excellent. So you kind of tie it all together. And with that weight loss program, I'm sure you tie it all together even more.

And you're known for having an interest in nutrition and spending a lot of time teaching, I guess, the physicians-intraining, the residents, and the students about diet and nutrition. Why do you spend so much time on these? And what kind of diets are you recommending?

DR. MCMACKEN: Great questions. I would say, looking back at my own training, I can't recall having any training in nutrition. What training that we had, I believe, was probably around how to avoid very unusual nutrition vitamin deficiencies and things that we don't see very often in day-to-day practice. But there was nothing that kind of equipped me to talk to a patient who has diabetes or talked to a patient who has high cholesterol.

So I've been practicing in a very traditional way — I had been practicing in a very traditional way for the first part of my career. And a few years ago, I attended a conference that completely turned my attitude on its head. And it really echoed to me how, all this time, what I'm mostly doing is prescribing pills and referring people for procedures and not

talking much about the root cause of their illness, not really looking at how everything is interrelated, even though I love that. Even though I'm an internal medicine doctor and I know that everything is related, I'm not equipping people to get to the root cause of what's causing their diabetes and their high blood pressure and their high cholesterol and their heart disease.

So I decided to learn a little bit about nutrition for that reason. And I found out that it turns out that dietary risks are actually the most important risk factor for chronic disease. There's actually studies that show they even trump smoking, not that we should smoke. But dietary risks are incredibly important for preventing and even reversing chronic disease.

DR. PINEDA OCHOA: And when you talk about chronic disease, you're referring to our major killers in the country – cardiovascular disease, diabetes, obesity, hypertension –

DR. MCMACKEN: Exactly.

DR. PINEDA OCHOA: - all of those.

DR. MCMACKEN: Right. The conditions that I and many of my colleagues see day in and day out just are extremely prevalent in our society.

DR. PINEDA OCHOA: And what kind of diet are you recommending? So that people get to the root of this problem and just put a Band-Aid or a pill to kind of cover the symptoms, what kind of diet would be most efficient to prevent illness and to have optimum health and nutrition?

DR. MCMACKEN: So I spent some time – I spent quite a bit of time looking at nutrition research. I actually received a grant a couple of years back to study the evidence behind different nutritional strategies –

DR. PINEDA OCHOA: Oh, wow.

DR. MCMACKEN: — and that's a huge, there's a lot of things published about nutrition — and to then develop a curriculum to teach my colleagues doctors-in-training about nutrition. I think times are starting to change, but right now, you have to kind of be proactive. If you're a practicing physician or if you're in training and you want to learn more, you actually have to be quite proactive to learn anything about nutrition.

DR. PINEDA OCHOA: You have to do it yourself.

DR. MCMACKEN: Exactly. And you know, what I really wanted to study was not what does the USDA say I should eat, what does this organization say I should eat, but what does the evidence actually say we should eat. And it's impossible to read all of the published studies. But when you do read a lot of studies, you start to see trends.

So the trends that I've seen are when people turn their attention to plant foods, they tend to have much lower levels of disease. It's quite simple. And that's what I tell my patients. When you look around the world where people traditionally eat plant-based diets, they tend to live the longest and the healthiest. And we know there's areas called the blue zones that are particularly great examples of that.

And in populations, when you compare different levels of meat eating, for example, different levels of eating animal products, those that tend to eat mostly plant-based diets tend to have extremely low risk of disease, such as the Adventist population, for example, where you can really look at groups of people who are omnivores versus semi-vegetarians, lacto-ovo vegetarians, pescetarians, and then vegans. With each decrease in animal products in the eating pattern, you see a step-wise benefits in terms of heart disease, diabetes, cancer risk, obesity. Those are epidemiologic studies, which are not controlled. But they give us really valuable information. And then when you look at randomized control trials, really the only pattern of eating that's been shown to reverse heart disease, for example, is a plant-based diet, one that doesn't have animal products.

DR. PINEDA OCHOA: That's amazing that they've been able to quantify reversal of cardiovascular disease.

DR. MCMACKEN: Exactly. And there's so many benefits to eating that way that we're only starting to understand. So in terms of our microbiome, our gut flora, our genes, lengthening our telomeres – the caps on our DNA, that –

DR. PINEDA OCHOA: That have to do with aging.

DR. MCMACKEN: — that have to do with aging, exactly. So there are so many benefits that we're only starting to understand. But my feeling and my understanding from my own research and the benefits that I've seen in my patients is that a diet based in plant foods is the way to go and is the most beneficial.

DR. PINEDA OCHOA: So a diet based in plant foods, you mean a diet that would abstain from eating chicken and white meats, fish, dairy, eggs. What's wrong with eating a little bit of organic eggs, organic hormone-free milk and dairy products, farm-raised meat or wild caught salmon? What's wrong with eating these animal products, even if they are farm-raised and organic and no hormones added?

DR. MCMACKEN: There's a lot of concerns that I would have with that. So the first is that some of the labeling is very misleading. And so when you think you're eating a product that's natural or farm raised, it's not necessarily that meaningful. Even the word humane is now used. And I think people have a different understanding of what that really means.

The other thing is that we know from many, many studies that

there are aspects of these foods, the animal protein itself has been closely linked to increased production of IGF-1, insulin-like growth factor, which is very closely tied to cancer. We also know that these types of foods are — whether these animals are given antibiotics or hormones from the outside, they contain hormones, because they're living beings. And particularly with milk, we get milk from animals, from cows that are pregnant. So there's going to be extra hormones.

And so I think that's a common misconception that, if you buy something that's hormone-free, it doesn't have hormones in it. It just means they weren't added. And we see a lot of health consequences from these foods. We know that even small amounts of fish, for example, in the diet increase the risk of diabetes. We know that eggs in the diet of someone who already has diabetes dramatically increases the risk of heart disease.

And I think it's very tempting to take things and divide them into smaller parts and say, well, what about saturated fat or what about cholesterol or what about animal protein. But I like to think about food in the package that it comes in. So of course, we need protein. But what kind of package are you going to get your protein in? Are you going to get it in a package that has other things that have been shown to be harmful? Or are you going to get it in a package that has phytonutrients and antioxidants and fiber that have been shown to be beneficial.

When we include meat, eggs, milk, and other animal products in our diet, we're also displacing foods that promote health. So I tell my patients all the time, when you have sausage and eggs in the morning, there's an opportunity cost to doing that. It's not just that you put foods in your body that don't promote health – at best, don't promote health and, at worst, are actually probably harmful. It's that you missed an opportunity to eat something healthy that would have actually given you nutrients that you need and you're missing. So there's – I could go on. But those are some of the reasons that I explain to my patients.

DR. PINEDA OCHOA: So a lot big concerns with animal products, for sure. And you direct a weight loss clinic here in New York City. Because when it comes to cardiovascular disease and diabetes, who cares, right? That's in the future. But if you're talk about weight loss and you've got people's attention—

DR. MCMACKEN: That's true.

DR. PINEDA OCHOA: — what does the data show about what kind of diet would be most optimal for keeping weight off or reducing weight — omnivorous diet or the same plant-based vegan diet? We just started on the Instagram account and saw your Instagram. And we saw a picture that you had on there where you're wearing a t-shirt that says —

DR. MCMACKEN: Carbs.

DR. PINEDA OCHOA: - carbs.

DR. MCMACKEN: That's one of my favorite shirts.

DR. PINEDA OCHOA: You are the director of a weight-loss clinic here. Tell us what's the deal with carbs? Everybody's afraid of potatoes and bananas.

DR. MCMACKEN: Right.

DR. PINEDA OCHOA: So what is your recommendation for that?

DR. MCMACKEN: So first of all, when it comes to weight loss, I think a lot of people — because there's so much frustration and sort of almost desperation around weight loss, I think people are always looking for something that's going to help them lose weight quickly and get to their goal as quickly as possible. And the truth is that there's an endless number of different diets that you could put a person on and they would lose weight. And to the extent that you limit calories, you're

going to lose some weight.

So as a physician and someone who cares about not just shortterm but also medium-term and long-term health, I'm really looking at strategies that help with weight loss but also promote health. So for me, the strategies that are commonly recommended or that people see, hear a lot about – the low carb strategies, for example- I don't really recommend, because people necessarily miss out on a lot of really important nutrients when they eat that way. And the studies show that people have higher rates of cardiovascular disease and cancer and even earlier death when they eat that way.

DR. PINEDA OCHOA: When they eat the low carb diet, which is basically high in animal protein usually—

DR. MCMACKEN: Right.

DR. PINEDA OCHOA: -animal protein and fat, right?

DR. MCMACKEN: Right.

DR. PINEDA OCHOA: Which would be like Atkins, like paleo, those types...

DR. MCMACKEN: To some degree, paleo, but primarily an Atkinsstyle diet. And there's a lot of different variations on those diets. So for me, the big picture is short-, medium-, and long-term health and achieving weight loss sustainably and healthfully at the same time. So for me, again, that equates to a plant-based diet. And luckily, there's a lot of evidence that plant-based diets work great for weight loss.

We have studies showing, first of all, that, again, when you compare different types of eaters, people that eat plant-based diets, like vegans, tend to have not only the – they have the healthiest body weights. In fact, in the Adventist group, they were the only group that were not overweight. And this has been reproduced in many other studies as well. So epidemiologically, we know that people following plant-based diets tend to have healthier body weights.

We also know that prospectively, looking forward in time, the foods that are most associated with weight gain are actually animal products and meat and low fiber diets. So that's two strikes against some of the other diets that are out there.

DR. PINEDA OCHOA: Powerful strikes.

DR. MCMACKEN: Yeah. And then finally, studies also show that people who follow mostly a whole food plant-based diet, meaning eating plant foods in their less-processed forms, tend to be able to eat as much as they want when they're hungry without measuring portions or counting calories. And they still can lose weight if they want to.

So to me, when I think about – I'm no stranger to counseling people to count calories or measure portions. That's a way that I used to practice. And I can tell you, it's not fun to do it, and it's not fun to recommend it. And people don't like doing it. And it may work in the short term, but it's not really a sustainable way to live your life, and it's not enjoyable.

It's not a life of abundance, where my experience personally, and my experience with my patients in following a plant-based diet, is that it is a life of abundance. And you actually end up experiencing foods that you may not have tried before and eating when you're hungry and not feeling deprived and feeling more energetic and having all these other side health benefits at the same time.

DR. PINEDA OCHOA: That's wonderful. Yeah, I know that's a very positive plus for a plant-based vegan diet. And you mentioned right now that, talking about animal foods, that a lot of data links it to, people who eat the most animal foods have the highest amount of body mass index, or weight. So that's very interesting. And I'm sure a lot of people don't know that. And you've written about common misconceptions that your patients express to you quite frequently. What are some of the most common misconceptions that you see in patients that you feel are most damaging in general and to their health that they just have no idea about this thing or another thing? What are the most common ones that you see?

DR. MCMACKEN: Yeah. I mean, I think we hit on it earlier when we started to talk about protein and carbs. And I think those two top the list. And they're related, of course. So this exaggerated concern about protein that we have in our society, I think is very damaging to people, because people seek out protein as if they were on the border of deficiency. And in my entire years of practice and medical school and residency, I've literally never seen a person who was protein-deficient.

But I can tell you that all day long, Monday through Friday, every day, I see people who are deficient in fiber. That is the nutrient that we should really be concerned about. And they're opposite, right? Because animal products don't have fiber.

DR. PINEDA OCHOA: None of them.

DR. MCMACKEN: None of them.

DR. PINEDA OCHOA: None of them do.

DR. MCMACKEN: So again, by fixating on protein, we end up, it's this cost. You pay a price for that. You end up losing out on nutrients that we actually really need to promote health. So when you look at how much protein people are actually eating, the average person is eating one and a half times the amount of protein that they need and often more.

So I think if we all ate the recommended amount and stopped there, we'd all be a lot healthier. And luckily, if you eat a plant-based diet, you end up getting, magically, the recommended amount through just following a plant-based diet. There's enough protein in plant foods that you get the right amount.

I think carbs is the other big misconception that's out there. And we touched on that earlier, that carbs will give your diabetes. Carbs will make you gain weight. Carbs will-

DR. PINEDA OCHOA: Bad.

DR. MCMACKEN: -they're bad for you, just bad. And my experience, again, has been completely the opposite. And of course, if you're eating carbs in a very processed form, just like any processed food, it's not going to benefit you. But if you're eating a plant-based diet, which is naturally high in carbs, you'll do great. You'll probably lose weight if you want to.

That's the diet that's been shown to prevent diabetes. Actually, the whole grains are the most powerful food in terms of preventing diabetes. So it's carbs that prevent diabetes, ironically, even though we always think that people who have diabetes can't eat carbs or have to count their carbs.

DR. PINEDA OCHOA: And people think, well, if I'm going to be on a plant-based vegan diet, then what is it that I have to eat to get my protein? Like, do I have to eat almonds every day? How do you— just completely, people say, well, where am I going to get my protein? So what is your response to that?

DR. MCMACKEN: Yeah, my response is that every plant foodevery food has some protein. And if you look at broccoli, it has more protein per calorie than beef. So people are often surprised to hear that. And the truth is, broccoli has a lot fewer calories than beef. And that's probably one of its benefits. It has a lot of fiber and fills you up without as many calories.

So I always tell people, if you're getting enough calories, you're getting enough protein. Protein, it's just extremely

tied to your calorie intake. So you'll know if you're getting enough calories, because you're hungry or you're not hungry.

DR. PINEDA OCHOA: Basically, if you're filled, if you feel satisfied, and you are eating a plant-based vegan diet-

DR. MCMACKEN: You're good to do.

DR. PINEDA OCHOA: -you're getting your protein.

DR. MCMACKEN: Yeah. There's no need to specifically target protein sources in the diet, just eat a diverse group of foods, make them as least processed as possible, and eat when you're hungry, and stop when you're full. It's so simple that it's almost hard to believe. But it works.

DR. PINEDA OCHOA: But it works. And it's powerful, because our health care system right now is pretty broken.

DR. MCMACKEN: Yes.

DR. PINEDA OCHOA: And there's a lot of billions going into it. And this seems like a pretty good solution to help of all of these issues. You wrote an article about some things that happen to your body when you stop using animal products. Tell us about some of those things that happen to your body when you eliminate the eggs, the fish, the chicken, the organic beef, when you get rid of all of the animal products? What are some of the changes that we start seeing in our bodies?

DR. MCMACKEN: So there's a few really cool things that I've learned that can happen when you eat that way and eliminate animal products from your diet. And one that I find very alluring is the amount of inflammation that we can measure and probably inflammation that we can't measure. So when you look at C-reactive protein, which is a marker of inflammation that we can test in the blood, we know that people following plantbased diets tend to have much lower levels of CRP. And when people who are eating a traditional Western style diet adopt a plant-based diet, their levels drop as well. So it's very powerful.

And the reason it's powerful, inflammation sounds like it's a loaded word. And we don't want – some inflammation is normal. After you sprain your ankle, that's a normal type of inflammation for the short term. But living with inflammation day in and day out is not normal. And that's exactly what most Americans and most patients I take care of have.

They're walking around in this low grade level of inflammation all the time. And it's closely tied to those same diseases that we see. It's tied to diabetes, cancer. It's tied to Alzheimer's disease. It's tied to heart disease. And so I find it really incredible that we can modify this through the foods that we eat. So that's one.

I think a lot of people realize that cholesterol is very tied to our diets. But what I don't think they realize is that you can actually lower your cholesterol as much by changing your diet as you can with pills. And I don't think a lot of doctors realize that either. And doctors will often see a patient with high cholesterol and just right away be tempted to prescribe a medicine for them without actually checking in and saying, what are you actually eating?

I have had patients change the way they eat to a plant-based approach and drop their cholesterol 40%. And you don't necessarily see that when you follow one of the nationally recommended diets that might include fish or chicken, eggs, modest — everything is very modest. But when you eat that way, you get modest results. So what I've seen in my experience and what the literature supports is that, when people transition to a plant-based diet, they can drop their cholesterol tremendously and obviate the need, in many cases, for taking a drug. And there's, of course, only positive benefits to eating this way, because it addresses so many other things at the same time. Other things that happen when you stop eating animal products, prevention of diabetes, which we talked about a little bit, is very, very powerful. And we know that — I think the latest numbers are that 38% of Americans have a condition called prediabetes. So it's really astounding when you think about it. And I see it in my practice as well.

There's a tremendous number of people – the burden that people face, the burden our society faces of future diabetes is astounding. We think we have it bad now with diabetes. But if 38% of Americans have a condition where they're going to develop diabetes, we're looking at an even worse epidemic down the road. So eating a plant-based diet, again, the whole grains, which are very powerful for preventing diabetes, vegetables, fruits, which by the way prevent diabetes as well, beans –

DR. PINEDA OCHOA: You're not afraid of fruits?

DR. MCMACKEN: Not afraid of fruits, yeah. And I tell my diabetics, eat fruit, you'll do great, you'll do really great. So yeah, I mean, preventing diabetes, changing the way our genes work. Dr. Dean Ornish has done incredible research with others showing that, when people eat a plant-based diet, that cancer genes can change the way that they're expressed.

We talked a little bit earlier about telomeres in plant-based diets, the caps on the end of our chromosomes that keep them stable and tend to shorten as we live, we can actually lengthen those telomeres by eating a plant-based diet. We also talked about the microbiome and how — this is so cool — within a couple of days of changing to a plant-based diet or changing your diet at all, your microbiome patterns change completely. It's very quick.

And you eliminate bacteria that make toxic substances, like TMAO, which is a substance that, if you eat an omnivorous diet, you eat certain foods, eggs and meat and fish, it's not

just the components of those foods that cause disease, but it's also how they interact with your gut bacteria. And they make a substance called TMAO, which accelerates our atherosclerosis, which is hardening of the arteries. So the benefits are so vast – these are just a few of the benefits – but the more you learn about it and the more you practice it and see it, the more you realize just how powerful it is.

DR. PINEDA OCHOA: And you talked right now about people who do live with an omnivorous diets and how they have a different microbiome, are you familiar with a physician by the name of William C. Roberts? He's a cardiovascular pathologist. I think he's got some 1,600 or 1,400 medical publications.

DR. MCMACKEN: Yes.

DR. PINEDA OCHOA: And in the his studies, he's done some comparative anatomy. And he's written about how humans by their characteristics of our intestinal lengths or appendages and other physiologic characteristics, he writes and he says, Dr. William C. Roberts, that humans actually have characteristics that resemble more of those of a herbivore and not a omnivore. He says that even though we behave as an omnivore, we're actually more suited physiologically and anatomically as a herbivore. What is your opinion on what he says? And do you agree with him?

DR. MCMACKEN: I think it's a tricky question, to be honest. I'm not an evolutionary biologist by a long shot. But I think the key point is — there's a couple of key points that I take away from his arguments. One is that we are not obligate omnivores. Okay, so I think an argument can be made that we can certainly process animal products.

So we are not required to be herbivores. But we're also not required to eat animal products. And if anything, for all the reasons we've talked about here, we do a lot better when we eat plant foods as a society. And historically, I think there's this perception that people ate a lot more meat and animal products than they really did.

And when you think about how hard it was to get animal products in the diet, people were eating mostly plant-based diet — we've been eating mostly plant-based diets a long time. And now we're in a situation where the planet is in crisis and there's a lot of other reasons why we should really be evolving to continue to eat a plant-based diet. We are dying from diseases that are completely preventable by diet. So the argument is almost moot.

DR. PINEDA OCHOA: Not needed.

DR. MCMACKEN: Yeah. Not only are we not obligate omnivores, we don't have to eat animal products, but we're a lot better off when we don't.

DR. PINEDA OCHOA: For sure.

DR. MCMACKEN: — if we want to continue as a species, and if we want to have a planet to live on. And it's all interconnected.

DR. PINEDA OCHOA: For sure. And then even if we have the capacity to digest animal products, if we look at all other herbivores, like cows that are herbivores, and now they're eating fish. So yeah, they have the capacity –

DR. MCMACKEN: Right, everything is.

DR. PINEDA OCHOA: Everything has the capacity of everything, but that may not be what we're most suited for. And in your practice, do your patients sometimes ask you, well, Dr. McMacken, if this is such a great and natural diet for me, then do I have to watch my B12? And if I do, how is this a natural diet for humans?

DR. MCMACKEN: Yeah, that's an interesting — and it's an interesting question that I've definitely heard before, or a point, I guess, that's been made. And you know, my response to

that is, what do you consider to be natural? So most of the food that we eat, whether it's animal products or plant-based foods, it's very different than the food that we ate 100 years ago, 200 years ago, 300 years ago, because of advances in genetics and breeding.

And I think you'd be very hard pressed to argue that the way our food system works and the way that most animal products get to our plates through a factory farming system, where there's antibiotics, other growth promoters, hormones, extremely confined situations, animals that are very sick in a very, very small space and getting infections, that is – you could make a pretty strong argument that that's not natural. So to me, B12 is also, by the way, historically we get it from bacteria, from the soil and it's made by bacteria in the lower intestinal tracts of all animals. And when animals pass excretions into the soil, B12 gets into the soil. And so if we were to eat all our for food very dirty, we might get B12 no matter what we ate.

Nowadays, even the animals that we raise for food are not eating dirty soil or grass most of the time. They're eating very controlled diets. And so they are artificially supplemented with B12, their diets.

DR. PINEDA OCHOA: The animals?

DR. MCMACKEN: Yeah. So either way, you're getting a vitamin B12 supplement, whether you get it from your animal products or whether you buy it in the store. And I think that the last and most important argument to me is, if you think it's unnatural to take a B12 supplement, to go pay for a B12 supplement, do you think it's natural to die of a disease that you could have prevented by eating in a different way? I think because these are chronic diseases and long term and we don't connect them with diet, we think that it's just natural to die of heart disease, or it's just natural to get diabetes. Oh it runs in my family. But the truth is, we're finding out it's not that natural. It's actually related to a lot of the choices that we make on our plates. And so that to me, that's what's unnatural, not taking a B12 supplement and living a long, healthy life, by eating a plant-based diet.

DR. PINEDA OCHOA: It's amazing that sometimes, even insects know what to eat to be healthy. We pride ourselves on so much intelligence. And yet, we don't even know what to eat. We're all confused and eating the wrong things and then dying because of our food choices.

And the last thing I want to ask you, speaking of intelligence, a lot of people – I don't know in your clinic, have you ever heard patients of yours tell you, oh, Dr. McMacken, but if our brains grew because of eating meat, why should I stop eating meat right now? Is this something that you come across frequently?

DR. MCMACKEN: You know, it's funny, I actually have not heard that. And that's probably an important point, because that's not something I was ever — part of my medical training or that we need meat to have our brains function properly.

DR. PINEDA OCHOA: Or that your brain grew because -

DR. MCMACKEN: Grew evolutionary, no.

DR. PINEDA OCHOA: - because of meat?

DR. MCMACKEN: Yeah. And I don't think there's a lot of truth to that. And I would like to see the science that proves that. But what I do know is that eating meat is connected to us getting Alzheimer's disease and other neurologic diseases. So when you talk about a healthy brain now in 2016, you should really be focusing on plant foods.

DR. PINEDA OCHOA: Yeah, I think you're absolutely right. Dr. McMacken, thank you so much for all of the work that you do.

DR. MCMACKEN: My pleasure.

DR. PINEDA OCHOA: And for teaching all of the medical students and the residents and all of the research that you do.

DR. MCMACKEN: Thank you.

DR. PINEDA OCHOA: And thank you so much for spending some time with us. We really appreciate it.

DR. MCMACKEN: It was fun. Thank you.

DR. PINEDA OCHOA: Thank you.

This transcript is an approximation of the audio in above video. To hear the audio, please play the video.