



**The Good Clean Nutrition Podcast  
Episode 11 Transcript**

**Episode 11: Brain Food: Exploring the Gut-Brain Axis with Uma Naidoo, MD**

Uma Naidoo:

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Mary Purdy:

Welcome to the Good Clean Nutrition Podcast, where we speak with credentialed experts about trending topics in health and nutrition. I'm your host, Mary Purdy, integrative dietitian and nutrition educator and we're happy to have you join us today. Now when it comes to nutrition and diet, a lot of people think immediately of their physical health, but research shows that what we eat or don't eat, can actually affect our emotions and brain health. This may be great news because I have a feeling with the last couple of years, many of us, myself included, could use a little extra support in that department. Today, we are joined by Dr. Uma Naidoo to speak on Brain Food: Exploring the Gut-Brain Axis.

Dr. Naidoo is a Harvard trained psychiatrist and professional chef, and the first nutritional psychiatrist recognized by the American Psychiatric Association. She is the founder and director of the first hospital-based nutritional psychiatry service in the United States, Director of Nutritional and Lifestyle Psychiatry at Massachusetts General Hospital, and Director of Nutritional Psychiatry at the Massachusetts General Hospital Academy, while serving on the faculty at Harvard Medical School. She is the national bestselling author of *This is Your Brain on Food*. I've had the privilege of hearing Dr. Naidoo speak and I can attest that she really knows her stuff. Welcome Dr. Naidoo. Thank you so much for joining us today.

Uma Naidoo:

Thanks so much for that kind introduction. It's great to be here.

Mary Purdy:

And you've had such a unique and interesting background. How did you become interested in food and nutrition?

Uma Naidoo:

It's a long story. I'm not sure if you have that much time, but as with many things, it began in my childhood. I spent a lot of time with my grandparents while my mom was in medical school during the day and just naturally through spending time with them, I learned healthy eating habits, watching my grandmother prepare food from scratch, helping her pick vegetables in the garden, eating family meals together. They threw in yoga and meditation, because they felt that, that's what every young kid should know. And then in the family, we had a lot of physicians, but also couple of Ayurvedic practitioners. So there was the talk about turmeric in the curries my grandmother was cooking or other foods, but also through the Ayurvedic lens. But I think that it really started to come together for me when I began my residency and my training in psychiatry, because I felt that we were leaving out tools and by just pulling



out a prescription pad and offering different forms of therapy, all of which I feel are valuable and appropriate in the right patient, we were not offering any other tools in the toolbox.

And very early on in my career, a patient challenged me claiming that I had caused him to gain weight, and from the date in front of me, I knew it was not me, but he was drinking this very large cup of coffee. And I took the opportunity to just ask him what he'd added to that coffee and interpreting that nutrition information to him was a very powerful moment in my career, which ultimately led me to realize that I needed to learn more and do more to round out the practice of psychiatry. And I did that on my own because of my own interest. And I understood in his "aha" moment when his eyes lit up and he thought, "Oh, I'm having 8 teaspoons of sugar and more than a quarter cup of processed creamer every single day, quite mindlessly. This is something I can change in my dietary habits and improve to help my waistline," which is what he was worried about.

But what happened was that not only was that my "aha" moment, we grew to have a therapeutic relationship. He lost weight, he felt better. And we really saw this method in action. And that really prompted me to want to do more. Culinary school came later on just because Julia Child is my food hero. And when I realized that she's known for a culinary career, but that was her second, I thought, "Well, why not me? I love to cook, and I would love to learn more about food." So, that really came together very organically, then I had the opportunity to start a clinical service at Mass General.

Mary Purdy:

Amazing. And so, you really saw that connection between what people were eating and the impact it had on their mental health. Share with us a little bit about what a nutritional psychiatrist is.

Uma Naidoo:

Nutritional psychiatry is a nascent field within psychiatry. It really is a recognition of the scientific evidence of the drawing and evolving scientific evidence behind using healthy whole foods and nutrients to improve your mental wellbeing. It does not exclude the use of therapy or medication, it's really inclusive and meant to be complementary to any other treatments that you may be engaged in.

On the other hand, there are some individuals and I think this is really based on how mental health practice and training is set up. We use DSM-5, the Diagnostic and Statistical Manual, and there's soon to be a new version out, which are checklists. And in mental health, we don't have a tissue biopsy or a brain biopsy. We have some blood tests, but we don't have diagnostic tests that really pinpoint a diagnosis. And I think when nutrition becomes so critical is that individuals fall between categories. And what I mean by that is I see patients with sleep disorders and trauma, anxiety and ADHD. There's no one size fits all for the human condition and this is where food as medicine can be a very powerful tool to help you depending on your condition and depending on how severe it is. It obviously wouldn't be the first line for a very severe illness because that person may need acute treatment first.

Mary Purdy:

But it can act as a wonderful compliment is what I'm hearing.

Uma Naidoo:

That's correct.



Mary Purdy:

People think of this as feeding the brain. But what we're also doing is feeding the gut, which then in turn communicates with the brain in this concept called the gut brain axis. Tell us a little bit about that and the role that the microbiome plays in our brain and mental health.

Uma Naidoo:

So, the gut and brain inextricably are linked throughout life because they arise from the exact same cells in the body. They then grow apart to form these two organs who remain connected throughout life, by the 10th cranial nerve, the vagus nerve, which then allows for bidirectional chemical signaling between these two organs. The other part that's helpful for people to understand is that serotonin is known as the happiness hormone, is the neurochemical upon which selective serotonin reuptake inhibitors are based, SSRIs like Prozac and Zoloft and others. But if only 5% of the actual serotonin is made and manufactured and taken care of in the brain, 95% of the receptors and serotonin is actually in the gut. So, this is where the vagus nerve is extremely important because the interaction of the serotonin, the serotonin receptors with the gut microbes, makes those metabolites available to the nerve endings for the vagus nerve, which is how it then gets communicated to the brain.

And I think that's helpful for people to understand because quite often an individual has heard or has prescribed or has taken an SSRI medication. And very frequently, the person develops gastrointestinal side effects initially. And that's because of the location of the receptors, the interaction of those microbes. So, taking care of those microbes from the perspective of food becomes equally important. And that's where food is medicine because whatever you eat as the digestive process happens, interaction with microbes happens. I say to people, you could go towards that healthy meal and have those healthy breakdown products like short chain fatty acids, or the less healthy meal and the drive through and the fast food, and that will feed the bad microbes in the gut. And the breakdown products of that digestion will be negative for the gut lining and for the gut environment.

Mary Purdy:

And so, these microbes in our gut, they are hungry for the good food so they can create those short chain fatty acids, create some of those factors that communicate to the brain that help with that connection of making more positive mental health status. So, what are these microbes hungry for Dr. Naidoo? What are we wanting them to get a little dish of?

Uma Naidoo:

They are little busy bodies, and they are always hungry, but they're hungry for the right kinds of food. And they are hungry. It's a very symbiotic relationship, because we take care of them and they take care of us, from vitamin production, hormones, immunity, mental health, sleep, circadian, rhythm, all of that, and so much more they are involved. So, that's what I mean by them being busy bodies. So, their favorite food is fiber and fiber is obtained from plant-based foods like vegetables, fruit, beans, nuts, seeds, legumes, healthy whole grains, lentils. That's really what nurtures them and takes care of them.

That makes them more effective in all the functions they need to perform. The foods that they don't like so much, but some of them do because some of them are bad microbes or the kind of the bad guys, are the ultra-processed foods, junk foods, processed foods, fast foods, the tons of added sugar in foods, processed vegetable oils and artificial sweetness and trans fats. Those types of foods actually disrupt the



gut microbiome because they start to set up for inflammation in the gut. So, they want to be fed these good wholesome foods, but they also thrive with the vitamins and minerals and nutrients in our food as well, but their primary source is fiber.

Mary Purdy:

So, I'm hearing whole foods, plant-based foods and trying to minimize those ultra-processed foods that ultimately don't serve the good bacteria, and in fact, feed the bad bacteria who may wreak havoc on our intestinal system here. And I know that you also talk about, in your book, the idea of anxiety and depression and burnout, which a lot of us have been feeling two years into COVID here. And those conditions can be helped, namely depression and anxiety, by nutritional intake. Tell us a little bit about those connections.

Uma Naidoo:

The foods that we eat are very impactful on our mood and other mental health conditions. And as I've explained, this gut brain axis, this ecosystem that exists, really promotes that. So, the foods that we should be including, if you think about your plate, you want to have good sources of food as best you can. Not everyone understandably has the same access. But for example, when I talk about Omega-3 fatty acids, you can get that for wild sockeye salmon, but you can also get that from canned salmon. The good sources of Omega-3s are also sardines, very inexpensive and something that you can richly get good Omega-3s from, but if you're plant based, you can also eat chia seeds, flax seeds, sea algae and other sources. It happens to be that there are the sort of these sources of Omega-3s that you want to include.

Then there's filling your plate with those vegetables. Especially my favorite are sulforaphane vegetables, cauliflower, cabbage, brussel sprouts. These are actually great because of their powerful antioxidants. Probably one of the richest sulforaphane veggies is broccoli sprouts. So, adding things in like that are really a good idea to sort of have the basis of your plate. And then you want to add in leafy greens. Leafy greens often ignored by people and the greener, the better, are rich and folate. Folate is important in mental health because low levels of folate associated with a low motor depression. So, building those in as a standard, at least every day in your meals becomes important.

Other things which are key, are the source of your protein. So, whatever your diet may be, whether you're vegan, carnivore, in between, good sources of protein become really important, good clean sources of protein and healthy fats. My favorites are avocado, the actual avocado, as well as extra virgin olive oil and spices. So, spices add in great flavor, but also a great brain boosting benefits. So, if you think about your plate that way, and you have components like that, most of the plate, you want to be heavy in those vegetables and plants because the biodiversity of the different plants that you eat, the different colors, the colors of the rainbow, the textures, all of those veggies and the food have their own microbiome. So, they are bringing a biodiversity to your gut that also helps the gut microbiome.

Mary Purdy:

It really is about the dietary patterns in general, as opposed to just one magic food that's going to affect brain health.



Uma Naidoo:  
That's correct.

Mary Purdy:  
I'm hearing that plant, full of variety, to feed the microbes, to give us numerous phytochemicals. And you touched on herbs and spices. And I want to pause and go back at something you said when we first started, which is turmeric or curcumin, the compound found in turmeric, which is used in so much Indian cooking and is part of Ayurvedic tradition and Ayurvedic approaches to medicine. I've seen some pretty interesting research about the impact of curcumin specifically on brain health, both as it relates to cognitive function and also depression. Tell us a little bit about the information that you have on that and how we can get it into our diets more.

Uma Naidoo:  
So easier to start with how do we get it in, because that's often what people want to know. And I would start off by saying that start off with a quarter teaspoon of a good quality turmeric, powdered turmeric with a pinch of black pepper added to super smoothie or tea to get yourself started. If you're a great cook, add it to roasted veggies. You really want to start and be consistent about taking it. Now turmeric actually has several different effects. It actually positively affects the gut microbiome, the actual ecosystem, and it's actually been shown to help the growth and the ratio of the beneficial bacteria there in the gut microbiome, so worth adding it in. It also helps to reduce inflammation by inhibiting certain inflammatory factors. It alters dopamine, serotonin and cortisol levels, all important in mental health, and it regulates micro-RNA and some other enzymes that are very powerful in terms of cognitive disorders.

So, turmeric is an easy, I like to call it a nutritional psychiatry, no brain in NP and B, which is, why not add it in unless you can't tolerate it or don't like it, it's very easy to add, and it has so many powerful benefits. The addition of piperine from black pepper makes the curcumin 20 times, 2000% more bio available and bioactive for the brain and the body. So, that again is just adding it in is pretty easy to do. That's a good place to start, if you want to start to include spices in your food and get the brain benefits.

Mary Purdy:  
And making sure you get that little touch of pepper in there to give it a little extra flavor, but also to improve that bio availability. Excellent. It's great that you're a chef because you've got all these fantastic ideas. You're not just telling people why it works, but you've actually got the recipes, the thoughts about it. So, I bet that makes you an even better practitioner. We've talked a lot about depression, and I know that there are other issues related to brain health, namely kids in school who are struggling to focus, especially with so much virtual schooling from home now. What kinds of dietary patterns may help younger kids to focus?

Uma Naidoo:  
When it comes to children, I feel that one of the things we, and I'm not saying it's easy, but I think that one of the ways that we can start helping them on a healthy pathway in good nutrition is really involving them in the process of food preparation, purchasing food, having them be around healthy food. So, it really is something that they begin to absorb and understand. Introducing them to new colors and texture and fun veggies makes making it interesting for them. Sometimes disguising a vegetable in terms



of something else that they enjoy eating but making sure that spinach gets added to a healthy smoothie that you're making them with a touch of berries. Making colorful carrot sticks in an air fryer oven so that they have that crunchy texture, but they're actually eating a veggie.

Making a beet hummus. So, one of my favorite things is teaching people a monster beet hummus, because it's that gory purple color. They love it and they want to eat it, but it also has healthy chickpeas and tahini in it, all really great brain healthy foods. So, including the beets, which are super healthy. So that is one way to engage them, involving them in the food process, purchasing as well as preparing food and making sure they understand how important it is and then making sure that they have access to healthy snacks. It is easy to get processed, packaged snacks, I understand that, and it's been a hard few years, so let's just take a step back and acknowledge that. But you know the more times we can chop up celery or have carrot sticks or sliced peppers, the sweet peppers with, for example, red bell peppers, have some of the highest levels of vitamin C. People focus on citrus fruit, but in fact, this is something people are ignoring, have them dip that in a nut butter, nut and seed butter or in hummus.

That's bringing fiber, vitamins, nutrients, minerals, and they're eating a healthy snack instead of a pretzel, a cookie or a chip. If they like the crunchy snacks, then make home baked home oven roasted spinach chips, which literally takes a couple of ingredients and can be ready in 20 minutes. So, it's about finding other ways to engage them around that food conversation and starting early. Now, if you're listening to this and your children are older, the good thing is that there's neuroplasticity, something that we didn't know until research was done in the last century. And now that we understand that the brain can change, a lot of the research began in the 1940s, but then really came forward more in the 1970s, that there is neuroplasticity and research that was done that shows the brain can change. So, there's always hope, whatever age you're at, you can always make that effort eat better. Certainly, healthier eating will reduce any inflammation in your gut microbiome and it'll support your brain health.

Mary Purdy:

Excellent. So, getting kids involved and perhaps older kids, as well as adults, in the cooking process and making it fun and visually appealing, I have a feeling that beet hummus is going to be a real winner and more than just kids are going to want to take a bite of that. Let's take a quick pause to hear from the sponsor of this podcast, Orgain.

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Let's get back to our conversation with Dr. Naidoo. So, Dr. Naidoo, we've been talking a little bit about kids and now on the other side of the life cycle, and in contrast to young children with developing brains, a lot of us are concerned about aging and concerned about our brain health. How can we combat age-related, cognitive decline through nutrition?



Uma Naidoo:

It goes back to those healthy eating principles, but there are certain things that I think we want to focus on when it comes to memory and cognitive health. The one thing we need to understand is that we think about Alzheimer's and cognitive disorders as a disease of our parents, our grandparents, our old aunts and uncles, when in fact cognitive health is really part of all stages of life, and here's why. When we eat healthily, we are actually combating inflammation in our gut. However, when we're eating a poor diet, that is really laced with somewhat unhealthy foods and there's inflammation in our gut, that inflammation in our gut microbiome loops back to that ecosystem and involves the brain, and this is where you get the setup for neuro inflammation. Many of us may be walking around with early changes, which are ultra-microscopic and not showing up clinically in any form of symptom, but we can actually reverse the future growth or development of those changes by how we eat.

So, we don't yet have a cure for Alzheimer's, but we can certainly improve our diet by reducing the one thing that we can impact, which is neuro inflammation. And how do we do that? Through our diet. This is I think the most important takeaway about cognitive health for everyone at any age or any stage of life. The MIND Diet by the late Martha Clare Morris and her researchers was really shown to be a healthy way to go for improvement of cognitive health and it really is based on healthy green leafy vegetable, color of the rainbow vegetables, berries, nuts, olive oil, whole grains, fish, beans, poultry, and red wine.

But other things to include if caffeine agrees with you, caffeine is a great antioxidant and consuming less than 400 milligrams a day is actually thought to be healthy. Olive oil is protective and a super great anti-inflammatory, antioxidant properties. Herbs and spices, again, turmeric comes in here with that pinch of black pepper, but other spices like cinnamon, saffron, rosemary, ginger and sage, all actually have been shown to help with cognitive health. So, adding in those foods becomes important and then a very important part of the same conversation is combating or limiting the foods from the standard American diet, otherwise call the Western diet, which are damaging our neurons, which are damaging our gut, causing neuro inflammation and really not helping us. So, we want to think about it that way.

Mary Purdy:

So, food truly is medicine for our brains. And I'm hearing that we have the opportunity to rewire our brains, knowing that we can see neuroplasticity as a reality, we can reduce neuro inflammation with what we're eating and what we're not eating. And I think there's going to be a lot of happy coffee drinkers out there to note that, that's a good source of antioxidants. Is there something in particular that you feel like if someone's trying to get started with supporting their brain, where's the best place for someone to begin?

Uma Naidoo:

I have been asking people and this has been a good method that has helped people, is it's been a long two or more years now, really closing it on two years. And many people, many of us, have picked up an unhealthy habit or two. I've been asking people, what is it that you've identified during COVID that's been hard for you? Are you leaning on that extra glass of wine to help you sleep, or even previously only a glass of wine with dinner on a Friday night, but now having a glass of wine every night? Have you been needing four cups of coffee to get yourself through the day? Have you been stocking up in cookies, pretzels, daily ice cream, because that's how you've been able to cope with the immense amount of



stress that's come with everything that's going on? I ask people to start there, identify one thing that is concerning you.

And I ask them to identify because if they've identified it, they've noticed or been concerned about it enough to reach their awareness, and they are already reflecting an ability to want to change that. That's the most powerful way in to making a habit change. Once I identify it, then I work with them to either create a recipe or create an alternative snack or food, something that has the same flavor, texture, but a better nutritional profile, that helps them get over that craving for the cookie or the ice cream or leaning on that glass of wine.

And that to me, is the most powerful thing that you could do for yourself. In terms of foods, I've listed some powerful foods and if any one of those groups or a specific food, or maybe trying out a new spice appeals to you, you could also start there. Start slow, this is not an overnight fix. It's not a quick fix. It's a slow and steady program that actually helps you with a lifestyle changes that become part of how you live versus a quick fad diet where you want to lose five pounds before a wedding or an event. This is a sustainable plan to help your mental wellbeing.

Mary Purdy:

And you're really personalizing, it sounds like, for the person that you're working with, what are they identifying as being the biggest issues for them? Where can they begin? How can you help enable and empower them to make that happen? And then obviously to evaluate the results and see what's working for them and maybe where they still need a little bit of support. Dr. Naidoo, if folks out there listening, want to learn more and have a better understanding of how to get in touch with you and utilize the resources that you have, how can they do that?

Uma Naidoo:

So, it's pretty easy. You can find my book where books are sold, support your local independent book seller. And it's called, This is Your Brain on Food. My website, sign up for my newsletter where you'd get free information and read updated research from me. It's [umanaidoomd.com](http://umanaidoomd.com) and follow me on social, where we also put out the recent research and updates in nutritional psychiatry. It's @drumanaidoo.

Mary Purdy:

Any final words from you about this connection between our food and our food system and the impact it has on the brain.

Uma Naidoo:

Food is incredibly powerful, and it is the one thing compared to a medication prescription or something else that your doctor or other practitioners asking you to do, that you can control. So, the power is at the end of your fork, and it is a very powerful tool that you have to improve your mental wellbeing. And remember that when you are mentally feeling well and healthy and have a better mood, less anxiety, your physical health follows, because we know, that research has shown that these are intertwined. And we know from the gut brain connection, that all of our systems really interact in a collaborative way with one another, so the power really is at the end of your fork.





Mary Purdy:

I love that, the power is at the end of your fork or your spoon, depending on what you're eating that day. Well, thank you so much, Dr. Naidoo. It was such a pleasure to speak with you and I can't wait to take another look at your book, This is Your Brain on Food.

Uma Naidoo:

Thank you so much.

Mary Purdy:

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