

Dean & Ayesha Sherzai, MD

The Best Foods to Prevent Alzheimer's



As cutting-edge neurologists and brain science researchers, Drs. Dean and Ayesha Sherzai believe that great brain health starts at home. They are dedicated to educating people on the simple steps to achieve long-term brain health and the prevention of devastating diseases such as Alzheimer's and dementia. As directors of the Alzheimer's Prevention Program and the Healthy Minds Initiative, the largest community-based Brain Vitality research programs in the country, the Sherzais help their patients and many communities adopt brain-protective programs that they can follow for the rest of their lives. They're bestselling authors of *The Alzheimer's Solution*, and their latest masterpiece, *The 30-Day Alzheimer's Solution: The Definitive Food and Lifestyle Guide to Preventing Cognitive Decline*.

You'll discover what the latest research tells us are the best and worst diet and lifestyle choices for brain health and dementia prevention.

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Contents

What You Need to Know About Alzheimer's	3
It's Never Too Late to Improve Your Diet	4
How a Plant-Based Diet Changes Cognition	5
Plant-Based Diets Reduce Risk for Alzheimer's	6
Meat is Suboptimal	7
Natural Fruit Sugar and the Brain	8
Your Brain on Berries	9
Fats You Should Be Eating	10
DHA and EPA on a Plant-Based Diet	11
Olive Oil and Coconut Oil and the Brain	12
Coffee on the Brain	13
Advice for Improving Sleep	14
The Neuro Nine	15

Ocean Robbins: Welcome to the Food Revolution Summit, where we explore how you can heal your body, and your world, with food. This is Ocean Robbins. And I am joined by my dad and colleague, John Robbins, in welcoming our guests, Dr. Dean Sherzai and Dr. Ayesha Sherzai.

While, most of the major chronic illnesses in the industrialized world are stable or on the decline, rates of Alzheimer's shot up 70% in the last decade. This power couple believes we can eliminate up to 90% of Alzheimer's cases. And through their work, Dr. Dean and Doctor Ayesha Sherzai have proven it. They're both neurologists and researchers, as well as a unique husband and wife team, on the cutting edge of brain science.

As directors of the Alzheimer's Prevention Program at Loma Linda University Medical Center, the Sherzais help their patients adopt brain-healthy programs that they can follow for the rest of their lives. They are bestselling authors of *The Alzheimer's Solution*, and their latest masterpiece, *The 30-Day Alzheimer's Solution: The Definitive Food and Lifestyle Guide to Preventing Cognitive Decline*.^{1,2}

So now Dr. Sherzai and Dr. Sherzai, we are so glad to have this time with you. And now for the interview, I'm gonna hand it over to my dad and colleague, John Robbins.

John Robbins: Well, thank you, Ocean, for that introduction. And thank you, Dean and Ayesha, for being with us today.

Doctor Dean Sherzai: Thank you for having us.

Doctor Ayesha Sherzai: It's so wonderful to be with you again.

John Robbins: I'm really glad to hear you're a part of this year's summit again. You add so much to it each year. One of the things I've been thinking about is how bleak the situation is for most neurologists who are working in the current medical system. I mean, if I were one, I think I'd be becoming cynical. And in fact, I remember the last time we spoke, you told me that there's this joke among neurologists, or about neurologists who see patients with Alzheimer's disease, and that the joke is that they basically say diagnose, and then Adios. Meaning that a diagnosis is basically all Western medicine has to offer. There, there just are no effective treatments.

And Ayesha and Dean, I know that both of your grandfathers suffered from dementia, and my mother did as well, she died of Alzheimer's after a devastating and long process. And I'm sure our listeners have their own experiences of this affliction. So what I wanna ask you to start is this, what is it that people today most need to know about the dreaded disease we call Alzheimer's?

What You Need to Know About Alzheimer's

Doctor Dean Sherzai: We have to understand the disease, as not a disease that starts at a point, that starts decades earlier. The second most important thing, that it's a process that can be abated, that

can be affected at any age. Those are powerful things to know. Because if you can start earlier, it's more likely that you can stop it from ever manifesting. That's incredibly powerful and empowering information to have.

John Robbins: It really is. And it's stunning actually, in contrast to the bleak picture that most neurologists have of these diseases. And you're saying that this process that develops eventually into dementia, perhaps Alzheimer's or another type can be abated if we take certain steps. So if I'm understanding you accurately, you're saying that 90% of Alzheimer's cases and other dementias can be prevented. And, you're saying that this 90% figure is based on rigorous science and it's been confirmed by the results you've seen in your clinic?

Dean and Ayesha, am I understanding you accurately? And if so, what is the role of food and diet in accomplishing this spectacular reduction in risk for dementia?

Doctor Ayesha Sherzai: Yes, that is absolutely correct, John. 90% of dementias can be prevented. There's a very small percentage of dementias that are heavily driven by genetics, but the percentage of people actually having those genes is only 3%. So 3% of all dementia cases are heavily driven by genes, and specifically speaking of Alzheimer's disease, and you know, there's really nothing that one can do when it develops very early in life.³

But for the rest of the cases, lifestyle matters significantly. People usually think that Alzheimer's disease is a very different type of disease that doesn't have to do anything with the normal mechanisms of disease pathologies that develop in our bodies. But when you look at the brain, when you look at this amazing, incredible organ that is very vascular, that has a lot of blood vessels, that has the same mechanisms such as glucose metabolism, lipid metabolism, inflammation and oxidation affecting it, it's essentially like the rest of the body.

And if we do the right things, the right kind of activities during our lifetime, we can prevent it from manifesting. And food is an incredible environmental factor. It's something we put in our body three or four times, every single day, and every meal we eat can either build the brain, or completely damage it.

It's Never Too Late to Improve Your Diet

John Robbins: I'm sure some of our listeners are in their 50s or 60s, or even 70s, and they're thinking, "Well, I've not had the benefit of this knowledge, I've eaten the way I have over the course of my life, I've had the lifestyle that I have had over the course of my life, and it hasn't been optimal for my health or my brain function. So here I am." Can such a person derive real benefit from shifting to a whole foods, plant-based diet and taking the other steps that are part of your program, even at such an age?

Doctor Dean Sherzai: Absolutely. The brain has an incredible forgiving capacity. It can rebuild, it can reconnect, it can restructure at any age. And the food that you give it is foundational to that rebuilding

process. We're talking about a brain that is three pounds, 2% of the body's weight, and consumes nearly 25% of the body's energy. But most importantly, it can connect at a rate that is unbelievable. Let me give you some numbers here; the brain has 87 billion neurons.⁴ Even when we get older, maybe you lose a few thousand, 10,000, 20,000, 100,000, here and there. But you still have 87 billion neurons.

Now those neurons are not just neurons. They're each massive factories and highways, waiting to expand. We're talking about each neuron that can make a couple of connections, or as many as 30,000 connections. That's a 15,000 times increase, capacity increase. That's a superhighway ready to be built at any one time. And what allows that connection to take place is appropriate food, clean food, nutrient-dense food that will allow it to connect. And opposed to that, every meal that you have that's full of the bad things, the processed food, the saturated fat, the salts, and the sugars, and... They actually destroy the capacity of those neurons to truly expand. They clog them up. They stop the factory from getting that higher level of processing going. That's how foundational food is.

John Robbins: You mentioned saturated fat. A lot of people think that saturated fat is good for them. And one reason for the confusion about this is that when people stop eating so much meat and dairy, which are the primary sources of saturated fat in the human diet, they typically start eating more white bread and white pasta and other highly processed foods and highly refined carbs, in which case they don't really experience much of anything in the way of improved health.

How a Plant-Based Diet Changes Cognition

And so this has led people to think, "Well the saturated fat, reducing it doesn't really help." But on the other hand, if people replace meat and dairy with beans and vegetables, and whole grains, and plant-based milks and nut cheeses and things like that, what can they realistically expect to experience, in terms of their cognitive function?

Doctor Dean Sherzai: The one common denominator Ayesha and I, I mean, in our clinics, we hear over and over again, is "I feel the-

Doctor Ayesha Sherzai: "The fog has lifted."

I think we hear that almost every single day when we help patients in the clinic and in the community get rid of all these addictive foods, processed high fat, high sugar foods, is the clarity of thought. The ability to focus and attend to a specific task, the ability to understand and learn more and be creative. That is unusually high.

Doctor Dean Sherzai: First, you have to give it time for the inflammation, oxidation, you know, lipid and glucose regulation to settle and come in. And then when that happens, now the growth happens. The growth process starts. Amazing.

John Robbins: I'm hearing that the kinds of steps that you advocate, and number one among them

is shifting to a whole foods, plant-based diet, not only, dramatically, up to 90%, prevent the cases of Alzheimer's from developing long term, but in the short term also, many people, once they get over the addiction that they have to unhealthy foods, experience; they're sharper thinking, they're clearer in their minds, their cognitive functioning, and even their emotional resilience is enhanced.

And that, so there's not just long term benefits of preventing something down the line that nobody would want to have happen to them, but also something in the more immediate sense that's maybe not right away, but pretty darn quickly, there starts to be an improved quality of life. Because if you're thinking more clearly, your judgment is going to be better, and you're going to see possibilities that you wouldn't have otherwise, you're gonna be more creative, you're going to be more lucid in your communications. I think that's going to improve the quality of your life across the board.

Doctor Ayesha Sherzai: Absolutely. And we're so privileged to be able to see that and I think that's the best part of our job; to see the immediate changes that people experience. And fortunately, technology has helped us understand these changes, and be able to document them. And so we have objective evidence of some improvement in aspects of cognition, and where people feel more productive, and...

You know, they usually come up with softer terms like, "I feel so amazing." Or "I have more energy." But there are actually some objective measures that improve, too. Which is a great testament to the incredible effect of food on our brain health. And from a neuro-scientific perspective, it makes sense. If you get rid of foods that tax the brain, and if you give the brain the right kind of nutrients to grow and thrive, the result is a brilliant, cognitively brilliant life.

Plant-Based Diets Reduce Risk for Alzheimer's

John Robbins: And that is something we all would love to have. And, you're showing us how to have it, how to get it, how to receive it, how to embody it. And I, as I'm listening to you, I'm remembering a fairly recent study that was published in the *Journal of the American College of Nutrition*. The researchers analyzed dietary data from 10 countries, along with other studies that have also looked at the relationships between diet and Alzheimer's disease.⁵ And they assessed the impact on Alzheimer's disease risk for several dietary factors, and what they found was that consumption of meat increased Alzheimer's risk the most. And second in line were eggs, and third were high-fat dairy products. And on the distinctly other hand, they found that high intakes of fruits and vegetables and whole grains as well, significantly reduced the risk for Alzheimer's disease. It seems to me that these findings are completely consistent with yours, are they?

Doctor Ayesha Sherzai: Oh, absolutely. And the beautiful thing is, it's been consistent with most of the studies that have been done around the world, whether it's on large populations being followed for over a time to see what their dietary patterns are, whether it's in a short-term clinical trial of dietary elements being given to one group compared to a standard Western diet.

Whether it's essentially looking at dietary inflammatory indices on different dietary patterns, whether it's the Mediterranean diet or the MIND Diet or the DASH, which stands for dietary approach to stop hypertension diet, you see a consistent pattern where plants, especially green leafy vegetables, other high fiber vegetables, fruits, nuts, and seeds, essentially plant-based food stand on top. And the things that are harmful are essentially animal products; meat, cheese, dairy products, butter, et cetera.

And so, we're very comfortable saying that a plant-based diet is the optimal diet for brain health based on all of the data that we've received over many years. And even though there's a lot of noise out there in the world about diet wars and specific vitamins and foods, I think we have enough information to understand what's good for the brain and what's not.

John Robbins: And what's good for the brain is a whole foods, plant-based diet, and what's bad are highly processed foods and junk foods of course, and animal products. It's the animal products that I imagine being a sticking point for a lot of folks who are new to this. I mean, there are so many people who love eating meat and many of them consider a steak to be an essential part of a good life. But if I'm understanding you, you're saying that a characteristic feature of diets high in meat is that they unequivocally contribute to cognitive decline and eventually to dementia.

Meat is Suboptimal

Doctor Dean Sherzai: A lot of the meat products have, you know, more B12 and so on and so forth. But what people don't get is the harms that come with that. And the fact that you can get that benefit easily through a thoughtful whole foods, plant-based diet is exponentially more than that contrived secondary benefit that you get from meat.

The benefit that's in meat can easily be found in a whole foods, plant-based diet. And more importantly, the harms, which are exponential can be avoided. So when you do factor analysis on the MIND Diet, what you find is the couple of things that there has been in the MIND Diet which we don't agree with, and even that authors wouldn't agree with, is chicken and, you know, fish and other things, all those benefits were secondary, meaning that the people did better because they ate more whole food, they ate more plants and they did better in spite of the chicken. No scientists in that group would say that chicken was the beneficial thing.⁶

John Robbins: What I'm hearing is that meat and probably dairy products as well can supply certain nutrients. I'm thinking of iron and zinc in the case of beef, I'm thinking of calcium in the case of dairy products, but they also come with a lot of stuff that is bad for us. And if we can get those same nutrients, which we can, in almost every case from plants, the only exception possibly being B12, which is very easy to supplement. And most omnivores are deficient in it as well. Then we can derive the nutrients that we need, all of them from plants, and not get the junk that comes associated and connected to the nutrients that are available in animal products. Is that accurate to what you're thinking?

Doctor Dean Sherzai: Absolutely, and I'm gonna pass it onto Ayesha, but one statement that I have heard, that kind of fits, it's like saying, "Water is important for you. So I'm gonna drink soda to get my water." Yeah, you get water out of soda, but how much poison you get in that as well should be in context. This is the exact same analogy. Yes, you get B12 and zinc, but there's so much harm that you acquire from eating meat.

John Robbins: The soda companies, the Coca-Cola and so forth, actually do advertise their beverages and justify them by saying, "Well, they're great ways of hydrating. We provide water. Your body needs water." (laughs) As if that was a healthy way to get water by drinking soda pop. I mean, it's equivalent, isn't it? To what we're seeing, with meat bringing some things that we need and want, but along with some stuff that most definitely damages us.

Doctor Ayesha Sherzai: We think everybody has a right to know what the optimal diet is and make their own decisions. I think with all the resources that we have now, there is no difficulty in adhering to an optimal diet. And I think people need to know the truth about what is included in their foods. I find that a little almost dishonest for people to withhold information and say, "Well, you know, this is better than the standard American diet." Yes it is. But why wouldn't you want to move to the most optimal diet if you could?

John Robbins: Yes, I agree. And I think people should know that small steps will help and will bring small results. But larger steps and a deeper commitment and a deeper perseverance in living out that commitment will yield magnificent results.

Doctor Ayesha Sherzai: Absolutely.

John Robbins: You know, I'm sure our listeners know that our typical ways of eating in this country are far too high in added sugars. I think that's a baseline that we kind of just know is generally accepted. But what about the natural sugars that are found in fruits? What impact do they have specifically on brain health?

Natural Fruit Sugar and the Brain

Doctor Dean Sherzai: So there's no question that glucose is the optimal energy source for the brain. So we need glucose and we need the simple sugars, but we need them in a certain way. It's not just the thing in itself, but how that thing is introduced into your body, how that thing is distributed in your body that's important.

So when you give glucose suddenly, which the body has never been used to in real life. And you know, we never had processed sugar. I mean, as much as people think it's processed sugar, it's ubiquitous, it wasn't. If you go to a third world country, I worked in Afghanistan and Somalia and other places where I created healthcare systems, sugar is a luxury. But here in the United States, in the Western world, it's

ubiquitous. Every food that is packaged has sugar in it. Why? Because it's addictive, that's because it's survival food.

Now, what, when you get sugar in high amounts, it's a shock state for the body, and especially a shock state for the most active and conscious organ of the body, the brain. So we get glucose in the most optimal way when it's less processed, it's bound to fiber, it's bound to foods like in fruit form and whole food form where it's actually digested and slowly released. So the glucose comes to the cells beautifully and in small quantities where the cell can use it. So sugar is needed, but only in whole food form, because then the body knows what to do with it, as opposed to getting shocked by it and having a reactionary inflammatory oxidative response.

John Robbins: So I'm hearing that eating fruits is good. I'm thinking that fruit juice might be borderline, because it might bring the sugars too swiftly in a form that the body can't decide on how, how it wants to absorb it. It's just gonna infuse right directly. Am I, is that your thinking?

Doctor Ayesha Sherzai: Agreed. And I think that goes hand in hand with the concept of the word whole or unprocessed. The more unprocessed your food is, the better, because the glucose and the fibers and all the other micronutrients are bound in such a beautiful synergistic way. And they're introduced into the body and the body knows and has been primed to be able to process it without affecting one of your systems, whether it's glucose, dysregulation, and so on and so forth. So yes, you know, fruit juices can be very high in glucose because you've stripped it away from the fiber. In small amounts, I suppose, it could be nutritious, but it's not something that people should be consuming on a regular basis. Whole fruits are much better.

Doctor Dean Sherzai: As if to add another layer of complexity, it also depends on your underlying medical condition, right? So if you have diabetes, if you have high sugar levels, then you have to be a little more aware and conscious of how much quick sugar you wanna give your body. The optimal is get it in whole food, but for certain people there's less leeway. So you have to be more aware and eat the whole entire fruit, as a better way of consuming the energy.

Your Brain on Berries

John Robbins: That's a good point. I'm thinking about blueberries. They've gotten a lot of press in recent years as brain nourishing foods. And the studies I've seen would suggest that that reputation is deserved. And I'm thinking right now of a study that was published in the *Annals of Neurology*, where researchers analyzed data from 16,000 older women. And they found that the women with the highest levels of blueberry consumption delayed their cognitive aging by two and a half years.⁷

And other studies have found that even common strawberries have enormous benefits for brain health. I've been so impressed by these studies that I now include berries, be it blueberries, but also raspberries or blackberries or strawberries in my diet in one form or another every day, sometimes

frozen that I then get taken out of the freezer and mixed into smoothies. But I make sure to get berries almost every day.

Doctor Ayesha Sherzai: Absolutely. Blueberries are one of the foods that we always recommend. And it's one of the foods in our Neuro Nine or nine foods that are great for the brain. And it's because of their incredible effect on oxidative stress or oxidative damage to the brain. The brain, being the most active organ in our body, produces a lot of debris and byproducts, and there's a lot of oxidative stress going on as a result of all those processes. And blueberries can withstand and improve the environment of the brain for it to continue to work as hard as it does on a regular basis. So yes, it is fantastic.

Doctor Dean Sherzai: Now, I want to add, a little layer to this, as much as an antioxidant effect that that blueberries has, if you in that same meal, you've replaced something that has fat with something that has blueberries, I don't know how that, what kind of meal system that would be, but you've just done an incredible benefit for the brain because fats are, there are many sources, but fats, especially saturated fats, are a major source of oxidation in your body. So you'd replace a source of oxidation that you would have once or twice a day in your body, with something that has an antioxidative effect. Just those two factors would completely change your relationship with your most important organ, your brain, or who you are.

Doctor Ayesha Sherzai: I actually have a good example of how you can replace fat with blueberries because, in a salad, instead of adding a typical ranch dressing, which is packed with saturated fats from dairy products, a blended blueberry dressing with some apple cider vinegar, some herbs and spices can really take the dish to the next level.

John Robbins: You're making me hungry. (laughs)

Fats You Should Be Eating

John Robbins: We also know that some people have demonized fats and I know that fat is actually, some forms of fat, are essential for brain health. The brain uses fats continuously in the process of rebuilding cells and other support structures. And, the studies I've seen show that nuts and seeds in particular and also olives and avocados, which are of course, all very high in fat, that consumption of these foods is associated with a lower risk for Alzheimer's and a lower risk for other forms of dementia. So are nuts and seeds and avocados and olives, the kinds of fats that you recommend people eat?

Doctor Ayesha Sherzai: Yes, we do. I'm glad you brought up the difference. When you look at the different types of fats, you know, saturated fats and trans fatty acids which are essentially man-made and packed in all kinds of processed foods, they're the harmful types of fats, because they are associated with insulin resistance with oxidation and inflammation at the cellular and the vascular level.

On the other hand, fats such as mono and polyunsaturated fats seem to be helpful. They help the neurons stay healthy and they help with the integrity of blood vessels. Our brain is a very vascular organ and it has millions and millions of branches and tributaries of blood vessels that take nutrition and oxygen to the very susceptible parts of the brain that are responsible for thinking, creativity, and memory, et cetera. And so these fats essentially prevent damage to the very sensitive parts of the brain.

But there's also evidence that mono and polyunsaturated fats can actually help the integrity of the cells and the neurons. And the foods that you mentioned, nuts and seeds, and especially the kind of nuts that have higher omega-3 fatty acids which is a type of a polyunsaturated fats are much better. Seeds like chia seeds and flax seeds, or sunflower seeds, avocados, olives, those are amazing plant sources of mono and polyunsaturated fats that one should consume on a regular basis.

DHA and EPA on a Plant-Based Diet

John Robbins: There is concern about people eating a whole foods, plant-strong diet getting enough of the long chain omega-3 fats DHA and EPA. What I do, 'cause I eat a whole foods, plant-based diet, is I eat about two tablespoons roughly every day of freshly ground chia and flax seeds. And then I also take an algae-based DHA and EPA supplement. Do you think I'm on the right track?

Doctor Dean Sherzai: Yes, a short answer is absolutely. The developing brain. The only fat it requires, it doesn't need any other kind, requires DHA, EPA, it requires the omegas. And there are times in life that you might need some help, some supplementation. We can't be magical. It's when the brain is developing during, you know, prior to birth and the first few years of life and even all the way to teenage years because myelination continues well into your late teens and early 20s. And that requires a lot of DHA and EPA and omegas for its development. And the same thing happens during pregnancy as well as later in life when the brain is under all this chronic inflammation where you need to give it omegas.

Okay. So we need to eat healthy and we need to take some supplementation, algae-based preferred.

John Robbins: When I was growing up, I had never heard of flax seeds. I had never heard of chia seeds.

Doctor Dean Sherzai: Same.

John Robbins: In my way of thinking, they didn't exist. I literally had never heard of them. And I don't think that's uncommon actually in our society. So that some of our listeners might find us talking about something that they almost don't know about. And I wanna take a moment to talk about chia and flax seeds. Those are two different types of seeds that we're talking about, both of which are high in the long chain omega-3 fatty acids that we need.

And, what I do is I have a dedicated coffee grinder, which I don't use for coffee because of the contrasting aromas and flavors. But I use this just to grind flax seeds and chia seeds. It just takes a couple of seconds. And I do it every couple of days, and keep it fresh in the refrigerator. And that way it's always fresh. And it's a remarkable food. I enjoy the flavor. Some people may find it takes a little getting used to, but hardly anyone finds it less than pleasant. And they are remarkably nutritious.

Doctor Ayesha Sherzai: Absolutely. Yes. One of the things that we work on and focus on is introducing community members and our patients to these incredible foods, then making sure that they feel comfortable doing it or add it to some of their comfort foods. For example, one of the most popular recipes that people like in my list is what I call the Omega Muffin. You know, muffin in itself is such a comforting word. (laughs) But when that muffin is packed with chia-

John Robbins: Yes it is.

Doctor Ayesha Sherzai: -flax seeds and also hemp seeds, three ingredients that, you know, they're not very common. But, you know, adding a tablespoon of each in one muffin completely takes care of the amount of omega-3s or DHA that individuals need. And also changing a typically harmful food that could be packed with butter and sugar and cream into something that is brain loving, that is heart loving, and that can extend your life. That's the focus. And that's what we've been focusing in our San Bernardino clinic and in our Healthy Minds initiative as well.

John Robbins: Imagine, now, after all this talk, imagine a blueberry, a muffin, blueberry muffin that has chia flax seed and then has this, marinade or whatever you call it of blueberries

Doctor Dean Sherzai: That's better than any pill out there. You know, I remember growing up in Pittsburgh, going to McDonald's having bacon, egg and cheese sandwiches.

John Robbins: Yet you replace that with a muffin which is hardy, fulfilling and has all those elements, that's a significant change in your body with one meal. And for really wonderful results, short term and long term. Since we're talking about that, I wanna ask you about one more thing in that world.

Olive Oil and Coconut Oil and the Brain

John Robbins: I mostly avoid bottled oils myself. But there are two types of bottled oils that I want to talk with you about because they are often touted as being beneficial to the human brain and I'm referring to extra virgin olive oil and to coconut oil. Now, I'm a lean guy, and I'm in good shape, and I do consume small amounts of extra virgin olive oil. And my reading of the literature tells me that's fine for me.

On the other hand though, I've not been impressed by the claims that are out there about coconut oil. I frankly have not been able to find any good science to back those claims up.

Dean and Ayesha, what's your view of extra virgin olive oil and of coconut oil for the human brain?

Doctor Ayesha Sherzai: This is a touchy subject. Are you sure you wanna talk about that? No, but you're absolutely right, John. There's plenty of evidence. Whether it's from the cardiovascular world or from the neurology world that shows that extra virgin olive oil in small amounts added to a healthy meal plan can be very helpful, can be very protective of diseases such as Alzheimer's, even Parkinson's and stroke. We have plenty of evidence showing that. And we also have evidence of different populations who consume olive oil on a regular basis in the context of a healthy life, being very healthy, having lower risk of Alzheimer's disease, and stroke, and other cardiovascular diseases.

And I think, when you look at some specific data, it is the polyphenols or those active antioxidant compounds that are available in olives and are extracted in the form of extra virgin olive oil that seems to be the most helpful components. There are also some small studies that are recently discovered showing that if the extra virgin olive oil is rancid or it has been not stored properly, that it could actually go into a process of oxidative damage and that could actually be harmful. So the focus has always been on consuming cold pressed small amounts of extra virgin olive oil. And that's that. And yes, consuming small amounts actually is helpful.

On the other hand, when it comes to coconut oil, I agree with you, John, there's not much data that shows that coconut oil is any good. The small amount of studies that we have with regards to Alzheimer's and coconut oil consumption were essentially case series. We don't have any clinical trials. And those case series were not documented very well. And unfortunately, marketing took over and it became something that it shouldn't have. Coconut oil and some other tropical oils such as palm oil are one of the highest sources of saturated fats. Again, you know, that's, a good evidence that saturated fat is associated with inflammation and oxidative damage. And the consensus in the scientific world is to reduce coconut oil consumption as much as possible.

There's been some indication that some of the components of coconut oil could be helpful. And we don't really have enough data on human beings showing that. So we're still waiting, keeping an open mind. But to the best of our knowledge today, coconut oil is not healthy, and people should try to stay away from it as much as possible.

Coffee on the Brain

John Robbins: Well, thank you for that answer. I wanna ask you about another food, or drink. A lot of people, and I am certainly one of them for sure, enjoy the daily morning ritual and have a cup of freshly brewed coffee.

And as a coffee drinker, I was heartened to see that the researchers who conducted the cardiovascular risk factors aging and dementia study found that people who drank three to five cups of coffee a day at midlife had a 65% in decreased risk of dementia in later life.⁸ Now I know that people love to hear good

things about their vices and I'm one of those people. But am I fooling myself in thinking that there are actually long term brain health benefits from coffee?

Doctor Dean Sherzai: To the best of our knowledge, there's strong correlational evidence and even some prospective evidence, that coffee consumption seems to be beneficial. There seems to be a plethora of evidence and we did a complete review on Parkinson's, and one of the things that repeatedly came back was coffee's quite strong relationship with a lower prevalence for Parkinson's. And that's important. Same thing with Alzheimer's.

So we think at this point that data speaks positively for coffee consumption. But, and a couple of studies have shown that that benefit is lost when you add in the dairy and the sugar. So, find alternative added tastes that are healthy, and there are many now, that can maintain the benefit of coffee and without the harms that we add to it.

Coffee is not good for people who have arrhythmia. Coffee is not good for people who have anxiety disorders. Coffee is not good for people who have certain kinds of conditions or this stimulant which it is in what... at one level can be harmful. So always know your medical condition, always discuss it with your healthcare provider. I think taking coffee with the right add ons if you don't wanna add at all and just coffee, it is shown pretty strong data to be beneficial for the brain in general.

Advice for Improving Sleep

John Robbins: Well, that's good to know. I only drink it first thing in the morning. With my breakfast. I don't drink it late at night. And the reason is because if I have found that my body tells me that if I drink it late in the day then I have trouble sleeping, and a lot of people today are having trouble getting enough sleep. And the advice they're given usually from health authorities is to engage in regular exercise and establish a nightly bedtime routine, and cut back on screen time and social media, these types of things. And those are all good steps.

Sometimes, folks who are having trouble getting enough sleep are also advised to eat foods like dairy products and turkey, which are high in tryptophan which is one of the building blocks of the sleep regulating hormone, melatonin. But I see a serious problem with this kind of advice. Tryptophan has to cross the blood brain barrier to have any sleep inducing effects. And in the presence of other amino acids that are found in foods like turkey and dairy products, it ends up competing and largely unsuccessfully for absorption. And in fact, I've seen studies showing that eating protein-rich foods like milk and turkey actually decreases the amount of tryptophan able to cross the blood brain barrier.

Dean and Ayesha, what advice would you give to people who are struggling with sleep issues?

Doctor Dean Sherzai: First of all, I can't tell you how amazing it is that of all the conversations we've had even in universities with neurologists, you've given the best explanation right there. The blood-

brain barrier is not an easy thing to cross. Their competing interests for that small space, for that limited barrier, across that blood-brain barrier.. And whenever somebody hears something like, "Oh, if I do this, my serotonin, my GI system goes up, or my tryptophan..." They don't realize that none of that actually crosses the blood-brain barrier.

Our best advice has been just don't eat an hour or two or three hours before sleep, depending on how much you can tolerate. Initially those who are very used to eating right before sleep, eat an hour before sleep. Or, and then you can move it to two hours. And that's good. Two hours before sleep, that gives enough time for food to be digested and your body can rest.

John Robbins: Well, in our society, we're trained to look for the magic bullet, or the pill.

Doctor Dean Sherzai: Yes.

John Robbins: The substance that's gonna solve whatever ails us. The research that I'd seen on diet and sleep, suggest that rather than emphasizing one or two specific magical foods with hopefully sleep-inducing properties, although there are foods that are helpful, it's best to focus on the overall quality of the diet.⁹ And also, as you were just pointing out, it's best, if you can, to allow two or three hours between your final eating of the evening and going to sleep. That's how I see the literature. Do you see it similarly or do you see variations on that?

Doctor Ayesha Sherzai: You've said it beautifully. You're absolutely right. Focus on pattern is more important than the individual specific foods. We don't eat macro or micronutrients. We eat food. And if we eat a variety of them, they all synergistically affect each other and it affects our body at the cellular level. And so we need to focus more on patterns.

The Neuro Nine

John Robbins: Well at the risk of contradicting both myself and you (laughs), I'm thinking about something you mentioned earlier which was the Neuro Nine. I think we were talking about blueberries and you said they were one of the Neuro Nine foods that you recommend highly.

All whole foods, plant-based foods, I think are our friends. But some of them may be our best friends and maybe ought to be in our diets more often. Things like blueberries that we mentioned, flax and chia seeds and... For those of us inclined and able to metabolize it, coffee might be included in that too. What are the other members of your Neuro Nine?

Doctor Dean Sherzai: Well on top, and I think you and Ocean would agree, are green leafy vegetables and especially dark green leafy vegetables like watercress and Swiss chard and collard greens, arugulas, spinach. All these fantastic greens that are packed with antioxidants and anti-inflammatories. The second one is whole grains because we have a lot of evidence showing that people who consume whole grains on a regular basis have lower risk of Alzheimer's, stroke, and other devastating

cardiovascular diseases. The third are seeds. Because we just spoke about the benefits of seeds. Beans and legumes stand on fourth because they're incredible sources of clean, plant-based protein.

Doctor Ayesha Sherzai: Berries, blueberries, blackberries, and strawberries are on number five. Nuts are the sixth, especially nuts like walnuts and almonds are incredible. And walnuts are very high in omega-3 fatty acids. Cruciferous are number seven, vegetables like broccoli, cauliflower, bok choy, kale, cabbage, and Brussels sprouts. Number eight is tea, green tea or, or white tea, or Oolong tea and coffee, sources of amazing antioxidants in our beverages. And the ninth one is herbs and spices. And I had to put herbs and spices together because sometimes you dry them and they become a spice. And especially spices like turmeric which we studied extensively when we were in Cedar Sinai Hospital.

Turmeric has an incredible capacity to bind to amyloid protein which is the harmful protein associated with Alzheimer's and it has the capacity to get rid of it and it reduces amyloid burden.¹⁰ But others like sage and rosemary and thyme and oregano, cloves, all of these are fantastic foods that have in a small quantity the highest amount of antioxidants and anti inflammatories.

John Robbins: You talked about green a moment ago as among your Neuro Nine and I totally understand why and I actually was thinking about research that was done at Rush University in Chicago where they assessed the diet and the mental function of about 1,000 elderly people. And it was a careful study. They adjusted for variables like education and exercise and family history of dementia. And, they found that those people who had regularly eaten leafy green vegetables, and we're talking about things like spinach and kale and arugula and chard, experience dramatically less cognitive decline than those who did not.

And I'm a huge fan of eating greens for health but even I, honestly, was stunned by the findings of this particular study. One researcher said it was, eating greens were, the equivalent of being 11 years younger in age.¹¹

Doctor Ayesha Sherzai: Yes. And it was evident on neuroimaging on the MRIs, the brains of individuals who consume greens on a regular basis actually looked better. They looked bigger and healthier and younger. I can't say enough of how amazing greens are. At the cost of sounding like it's a cure-all, but they have tremendous benefits on brain health and overall health.

When you look at greens like spinach, kale, arugula, they're packed with vitamins and nutrients like folic acid, nitrates, beta carotene, lutein, vitamin K, kaempferol, (laughs) alpha tocopherol. I mean I can go on and on and on. And each and every component of green has a tremendous function on its own in brain health. So, you know, consuming two to three cups of green should be a standard for everyone who really loves taking care of their brain health.

John Robbins: It seems to me that what we're really talking about here isn't just about reducing Alzheimer's disease risk, as important as that truly is. But we're also talking about overall brain health and the fact that the same food choices and lifestyle practices that reduce your risk of dementia will

also enhance your ability to think clearly at every stage of your life. And I think this is just incredibly important because it's really hard to overstate the importance of being able to think clearly, to think deeply, and to use the marvelous brain we've each been given to its highest potential.

When your brain is clicking on all cylinders, you don't experience brain fog. You're able to imagine, you're able to create, you can envision possibilities, and you can also see how to bring them into fruition. And all of these strikes me as a truly profound part of what it means to be human. I want to thank you, Ayesha and Dean, for your outstanding work, for your patience, persistent, and brilliant work, and for your profound caring for people and of course for being with us today.

Doctor Ayesha Sherzai: It's our pleasure. Thank you so much for having us.

Doctor Dean Sherzai: It's an honor.

Doctor Ayesha Sherzai: John, like Dean said it's an honor for us to be here. We are so grateful for your work and we can't wait to continue on this beautiful journey together to disperse information and the message of hope to everyone out there. So thank you for what you're doing.

Doctor Dean Sherzai: Thank you.

Ocean Robbins: We've been talking with Dr. Dean Sherzai and Dr. Ayesha Sherzai, directors of the Alzheimer's Prevention Program at Loma Linda University Medical Center, and authors of *The 30-Day Alzheimer's Solution*.² Dean and Ayesha, your message is brilliant. Your hearts are vast and we are so grateful for your outstanding books, for your brilliant leadership and for your partnership in the Food Revolution.

Doctor Dean Sherzai: Thank you so much and we love being on this journey with you guys.

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