



ALZHEIMER'S

THE SCIENCE OF PREVENTION

Episode 12: Support Your Brain With Supplements



- David Perlmutter, MD: We've covered so much critical information during the series and now it's time to focus on our very last topic: Supplementation.
- David Perlmutter, MD: Supplements are a great way to help support key functions in the body and brain by providing components that can be hard to get through diet alone. In our final episode, we're going to focus on how to use supplements as a tool in a plan to help reduce Alzheimer's risk.
- David Perlmutter, MD: I'm Dr. David Perlmutter and this is Alzheimer's - The Science of Prevention.
- David Perlmutter, MD: Throughout this series we've learned that not only is Alzheimer's on the rise, but that we don't have any meaningful treatment for this devastating situation.
- David Perlmutter, MD: However, what is so empowering is that we have also learned that we do have control over many of the factors that are linked to an increased risk of developing Alzheimer's disease and that we even have a say in our own gene expression. Various lifestyle choices that we make do indeed control the expression of many genes linked to brain health.
- David Perlmutter, MD: Through dietary interventions, adequate exercise, avoidance of environmental toxins, optimizing sleep, lowering stress, and of course lowering inflammation through nurturing the microbiome and even preventing and managing type two diabetes, you can profoundly influence your risk for developing Alzheimer's disease.
- David Perlmutter, MD: Our final addition to our toolkit is the use of targeted supplements to support and optimize brain health and function.
- Amy Berger, MS, CNS: People often ask, "Why do we need supplements? If I'm eating real food and a good variety of food, why should I supplement?" Well, you know, unfortunately our topsoil is fairly depleted of some of these nutrients owing to some of the industrialized farming practices that we have, so even if you're consuming whole, unprocessed, unrefined foods, those foods might not be as high in some of those micronutrients as they were 100 or 200 years ago. And beyond that, specifically for supporting robust health, we might want higher amounts of certain nutrients than we would typically get from foods alone. It's not unreasonable to supplement in targeted fashion. Based on blood work, work

with a licensed professional who can help you determine what you need and what's right for you.

David Perlmutter, MD:

Supplements may well reduce the risk of developing Alzheimer's, but how? Let's take a deeper look into how supplements work inside the body and the brain and the ways in which they can help strengthen our defenses against the development of Alzheimer's disease.

David Perlmutter, MD:

Supplements are incredibly diverse in nature. And while some of them may be of significant benefit, we need to be careful to make sure that we know exactly what we're doing, how much we're taking.

David Perlmutter, MD:

When it comes to Alzheimer's disease. We're going to focus on a very specific set of supplements that may very well be helpful for the brain.

David Perlmutter, MD:

Making sure you're taking the correct supplements is one of the tools that you will have in your Alzheimer's prevention toolkit. As we learned in episode ten, good, high quality sleep is a critical component of an Alzheimer's prevention plan. Let's look at why we should consider supplements for better sleep.

Michael J. Breus, PhD DABSM:

When you're thinking about sleep and some supplementation ... And by the way, I'm a big fan of supplements. And I think they can be very, very helpful for sleep. A couple of things that I like to talk about with my patients, number one is magnesium. Magnesium turns out to be incredibly helpful in many different ways. It's something that actually affects over 300 different functions in your body. But yet we don't actually get a whole lot of magnesium in our diets. And so many times we have to use supplementation to help us with that. So I'm a big fan of magnesium supplementation, specifically in the evenings.

Sarah Gottfried, MD:

The other supplement that I use a fair amount is melatonin, because I find that so many of my patients start to run low with melatonin as they get older. There's even some newer data showing that melatonin may help repair the blood-brain barrier. So I often will use melatonin as well for my patients who are having difficulty sleeping.

David Perlmutter, MD:

So we've just heard that magnesium and melatonin may be helpful in getting a better night's sleep.



- David Perlmutter, MD: Let's now talk about other supplements that may well benefit the brain. Specifically, DHA, B vitamins, and vitamin D. You've likely heard people talking about omega three fatty acids or fish oil.
- David Perlmutter, MD: These are fatty acids that typically come from cold water fish and have been shown to be particularly helpful with respect to the body and indeed for the brain.
- David Perlmutter, MD: But there's one specific omega three fatty acid that's shown to be specifically helpful as it relates to the brain and it's called DHA.
- David Perlmutter, MD: DHA provides powerful anti-inflammatory activity that is essential for optimal brain function. In addition, DHA increases the activity of BDNF and as such plays an important role in stimulating the growth of new brain cells. B vitamins, specifically B12 and folate, play a vital role in many of our body's most important systems and specifically play important roles in brain health.
- David Perlmutter, MD: Vitamin B12 is just one of the many B vitamins. However, it plays a vital role in many of our body's systems.
- David Perlmutter, MD: B12 deficiency specifically has been linked to cognitive decline and memory loss.
- David Perlmutter, MD: Higher levels of folate, also called vitamin B9, have been associated with lower risk for Alzheimer's disease.
- David Perlmutter, MD: Vitamin D is actually better described as being a hormone. This is because it has so many different effects across so many different platforms.
- David Perlmutter, MD: It's involved in our brains and actually activates more than 300 gene pathways.
- David Perlmutter, MD: Vitamin D plays a very important role as it relates to brain health and across the nervous system, as well as in the microbiome. Ideally, we would get an ample amount of vitamin D from the sun. But unfortunately for a variety of reasons, very few of us get nearly enough of this really important compound unless we take a supplement.

Georgia Ede, MD:

The most important supplements that people who eat a plant based diet need to be aware of, and by plant based I mean specifically vegan diet, are vitamin B12, which most people already know about and DHA, the omega-3 fatty acid DHA. The confusion around DHA though, yes it's an omega-3 fatty acid, but the omega-3 fatty acid supplements that come from plants are the wrong type. So what you find in flaxseed for example which is supposed to be rich in omega-3 or chia, what you find in those foods because they're plant based, is you find the omega-3 fatty acid ALA. Maybe you can convert a tiny little bit of that ALA into the DHA that our brains need, but it's very very difficult and most experts recommend that you eat sources of DHA directly. So if you're eating a plant based diet or vegan diet, you want to get a DHA supplement, an omega-3 supplement that comes from algae, because algae is not a plant, it's also not an animal, it's like neither plant nor animal. So algae contains DHA and EPA and that's really critical for brain health.

Dominic D'Agostino, PhD:

Omega-3s are really the building blocks of the brain. For example, DHA, docosahexaenoic acid is a big part of what we're researching, looking at cell membranes. And getting these in the diet through fish and fish oils and various plant based sources, to algae as a source of DHA and could be a helpful supplement, these are very important, healthy, beneficial fatty acids.

Ayesha Sherzai, MD:

So if you eat a variety of plant foods, you really don't need vitamins and micronutrients. But it's important for people to know whether they're deficient in any vitamins or nutrients, and only then they should be replaced. People who eat a whole food, plant-based diet at times are low in vitamin B12. They have to make sure that they check their vitamin B12 levels, and if they are low, they can take a supplement. The other thing that we all in general forget to take is a lot of DHA omega-3 fatty acids.

Amy Berger, MS, CNS:

Vitamin B12 is absolutely critical for healthy brain function. A B12 deficiency alone can cause cognitive impairment and other neurological and neurodegenerative symptoms. We also need DHA. DHA is one of the most abundant fats in the physical structure of the brain, of the neuronal cell membrane, so we want lots of that omega-3 DHA.

Valter Longo, PhD:

I think that nourishment is key, so certainly Omega 3s, and really I always talk about multivitamin every three or four days just to make sure. Vitamin D is another one that is, obviously,

becoming deficient in the majority of the Western population. So, in general, I think it's important to be highly nourished, and so it's up to the doctor to figure out what the patient may be deficient in and that should be supplemented.

David Perlmutter, MD:

Another important supplement that you've talked about is Vitamin D.

Dale Bredesen, MD:

Vitamin D is really, as you know, a hormone. It's a remarkable molecule. It's a little bit like your Wifi signal. You've got a signal that's going all over your body and it's being picked up, the Vitamin D binds to its receptors. They enter the nucleus and it affects over 800 different genes. You're really changing the programming of your cells. You're changing to a situation in which you have less cardiovascular disease, better bone formation, fewer tumors formed and reduced cognitive decline. It's really a strikingly important molecule in controlling your genetic expression.

David Perlmutter, MD:

Why is vitamin D so important for the brain?

Mark Hyman, MD:

It turns out vitamin D is not a vitamin, it's a prohormone and it influences the function of thousands of genes. It regulates everything from thyroid function, obviously bone density, your muscle mass, which regulates your body in so many ways, but it also controls the insulin function in your brain and there's so many vitamin D receptors in your brain that regulate insulin that have to be functioning well for you to be healthy. So vitamin D is also something that we've all been deficient in. About 80% of us are deficient in vitamin D and we need it from the sun, who knew and it doesn't actually work in the same way that their vitamins, it has to be developed from the cholesterol in our body.

Mark Hyman, MD:

So it's coming from cholesterol. So eating a low fat diet, actually not getting enough sunlight and working and living inside can promote vitamin D deficiency, which all has a negative impact on the brain. We know it, for example, causes depression, seasonal affective disorder from low vitamin D in the winter, but it also has a big impact on the brain function in general and any risk of Alzheimer's.

David Perlmutter, MD:

So we've seen that supplements can play an important role in a plan for Alzheimer's prevention by improving sleep or by fixing deficiencies in our bodies. Though there is certainly reason to believe that most nutrition could come from an optimal diet,

there's also some newer research showing us that certain supplements could still provide additional brain benefits.

David Perlmutter, MD:

One of the most interesting supplements comes from, believe it or not, the fleshy fruit of the coffee plant.

David Perlmutter, MD:

Not to be confused with the coffee we drink that actually comes from the seed of the coffee berry. Whole coffee fruit concentrate has recently been shown to increase a protein we've talked about earlier called BDNF. Brain derived neurotrophic factor. BDNF has been shown to literally help our brains grow new brain cells and has anti-aging effects.

David Perlmutter, MD:

Specifically, 100 milligrams of this compound has been shown to increase levels of BDNF by an incredible 143% in at least one study.

David Perlmutter, MD:

Although the research on whole coffee fruit concentrate is limited, it's an exciting area of medical research.

David Perlmutter, MD:

Lately we've heard about whole coffee fruit concentrate. What's that all about?

Dale Bredeesen, MD:

I think it's a very interesting molecule. When people were excited about, when people realized that BDNF turns out to be important, and hey we can increase it by about 10-14% through exercise, of course the race was on to find other things that increase BDNF and are there things that we can use. There are drug development groups that are looking at increasing BDNF.

Dale Bredeesen, MD:

One group actually began to look through various extracts. This group found, in a very exciting way, that whole coffee fruit extract from the fruit of the coffee, which is kind of like a big cherry, that in fact, this extract contains things that actually increase. Now the mechanism is not 100% clear yet. It remains to be seen, but so far it does not look as if it has any downside in terms of negative effects. People have used it for months without any major problems. I think it looks very promising as a way.

Dale Bredeesen, MD:

By the way, it increases BDNF more than exercise does, which does not mean you should stop exercising by any stretch. You should do them both. What's been found is that it seems to work better when taken in the evening and increasing your BDNF through the night. I think it's a very promising way to go.



- David Perlmutter, MD: Another supplement to mention is turmeric.
- David Perlmutter, MD: Turmeric is a member of the ginger family that continues to be the subject of intense scientific research.
- David Perlmutter, MD: Much of the research has focused on evaluating the antiinflammatory and antioxidant activities that stem from its active ingredient, curcumin.
- David Perlmutter, MD: Curcumin is linked to a variety of benefits in the body. But perhaps most notably, it activates genes to increase our anti-inflammatory capabilities while simultaneously improving blood sugar and metabolism. With this in mind, you can see why turmeric is such an important supplement in helping to prevent or reduce the risk of brain disease.
- David Perlmutter, MD: Why might turmeric be a good idea?
- Dale Bredesen, MD: Turmeric is another interesting one, where turmeric actually interacts directly both with amyloid and with tau. It's got this interesting effect which helps to reduce the amyloid. Separately from that, it is also a wonderful anti-inflammatory. Again, you've got multiple positive effects of taking turmeric. It should be pointed out that people who live in India who happen to use more of this do seem to have an overall decreased Alzheimer's prevalence and incidents.
- David Perlmutter, MD: Another promising supplement, MCT oil, has actually been shown to impart significant improvements in cognitive function in trials with patients who actually had Alzheimer's disease. MCT stands for Medium Chain Triglycerides and they are a source of healthy fat that can be readily used by the body for energy. They're actually broken down in the body quicker and easier than most longer chain fats, which makes him a great source of fuel, especially for the brain.
- David Perlmutter, MD: Now I want to introduce you to possibly my favorite supplement of all: Coffee. Coffee consumption has been repeatedly shown in large scale studies to be associated with a reduced risk for Alzheimer's. Why might this be? Although not really a supplement, coffee is rich in antioxidants called polyphenols. And in fact, coffee is the largest source of antioxidants in the western diet.

- David Perlmutter, MD: But beyond that, coffee nurtures the gut bacteria because it's rich in polyphenols.
- David Perlmutter, MD: The caffeine in coffee may actually inhibit the production of amyloid plaques in the brain. Coffee, like turmeric and cruciferous vegetables, is also one of the most powerful, if not the most powerful, activator of the gene pathway that turns on over 200 genes that may relate to detoxification and inflammation reduction. So you should feel good about enjoying your morning coffee. Just be sure to remember to avoid coffee later in the day as it can impact the quality and quantity of your sleep.
- David Perlmutter, MD: In episode seven we talked about the microbiome and how we need to keep it healthy. Remember, the microbiome is the collection of microbes and their genetic material as well as their metabolic products produced from the bacteria that live within our bodies.
- David Perlmutter, MD: Keep in mind that our gut bugs are involved in our metabolism and also help regulate whether we feel hungry or full.
- David Perlmutter, MD: One way to keep our microbes healthy is by supplementing with healthy bacteria or probiotics. Taking a probiotic supplement can help reset the balance of bacteria in your gut for better health throughout your body and even involving your brain.
- Anna Cabeca, DO, FACOG: On a regular basis, we've eaten out, we've experienced some influx of antibiotic most likely, or GMO exposure, so we have to be really conscientious that if we're eating meats or we have exposures to GMO, preservatives, that's affecting our microbiome, that's affecting our gut health, and the higher microbial diversity we have, the better health we have. So adding in a probiotic is important, as well as probiotic rich foods like kimchi, sauerkrauts that are rich in good flora can make a big difference in our overall health.
- David Perlmutter, MD: You can also look after your gut bacteria by providing them with the right nutrition. One food that is specifically supportive of healthy gut bacteria is called prebiotic fiber. This is the type of fiber that provides your gut bugs with what they need to flourish so that they can improve your health.

- David Perlmutter, MD: We find prebiotic fiber in many foods including things like dandelion greens, garlic, onions, leeks, sunchoke, but also in certain supplements like those derived from acacia.
- Amy Berger, MS, CNS: Prebiotics are a type of fiber that feed the probiotics. They sort of feed the good bacteria in the gut. These beneficial bugs will feed on that fiber that we find in things like Jerusalem artichokes and inulin and things like that.
- David Perlmutter, MD: Ideally, we should all be able to get most of our nutrition from our foods.
- David Perlmutter, MD: But we have to acknowledge that sometimes this may not be possible.
- David Perlmutter, MD: In addition certain compounds prove beneficial in amounts that we would otherwise not get in our normal diet. As is the case, for example, with Melatonin and whole coffee fruit concentrate.
- David Perlmutter, MD: Supplements help us fill in the cracks between our actual diets and lifestyles and an optimal diet and lifestyle. They are a practical way to make sure that we don't miss out on the essential building blocks for a healthy brain. Finding exactly the right supplement can be a challenge,
- David Perlmutter, MD: But there are definitely several ways to overcome this issue.
- Lisa Mosconi, PhD: test if you have any deficiencies, and if you have deficiencies, then supplements can help. But there is no evidence really that supplements help people who are not deficient in a specific supplement.
- Mark Hyman, MD: there are many tests you can do, but one of the most important is a measure of your status of folate and B12. There are new tests that are available. One of them is called homocysteine, which is a big word, but essentially we found that if your level is over 14 in your blood, your risk of getting Alzheimer's is double. That's frightening. And if we understand the risk of B12 we can also look at other indicators like methylmalonic acid instead of B12 it's a big word, but essentially these are better tests of folate B12 because their metabolites of these things and they reflect your real bodies level and treating those is relatively easy using the right kinds of folic acid, the right kinds of B12, B6 and

some other ingredients that can help bring these numbers down.

Max Lugavere:

When it comes to supplementation, there's no one size fits all regimen. I'm a big fan personally of high quality fish oil, vitamin D. I take magnesium.

Max Lugavere:

My supplement regimen changes day to day. For example, when I'm spending time in the sun, I won't take a vitamin D supplement. If I'm eating lots of fatty fish, which I try to do on a regular basis, like wild salmon, sardines, mackerel, then I skip the fish oil. I'm also a fan of not just fish oil, but krill oil, which is rich in a form of DHA, which the brain particularly loves called Phospholipid DHA. And so I sometimes will take krill oil. But again, I skip that on days that I'm eating foods like roe, which are salmon eggs and they're very rich in this form of DHA.

Max Lugavere:

Again, everybody's going to be different. You might not need a vitamin D supplement. I take a B complex, you might not need B complex. So that's where I think working with an informed practitioner becomes really important and having that relationship.

Amy Berger, MS, CNS:

There's a lot of different supplement brands on the market, and it can be very intimidating. When you go to the supplement aisle of the health food store, you're just overwhelmed by selection. I think the best way to do it is to work with a practitioner, work with a doctor or a nutritionist that has accounts with companies that produce supplements for professional use only, where they are purity tested. Every batch is tested so that what the label says is in the bottle is actually in the bottle.

Suzanne De La Monte, MD, MPH:

And that's a hot button issue whether you want to use supplements or not to prevent Alzheimer's, as I said, the studies haven't been long enough to even determine that. I personally think that there are certain things that people can do that help, certainly making sure you are not nutritionally deficient in vitamins D and all the Bs. Why do I say that? Because those vitamins are needed to make parts of the brain and the vitamin B1 B6 and B12 are, we call them neural vitamins because they support the nervous function. But how much to take, that's a matter of discussion, you want to make sure that you have enough and you're not nutritionally deficient.

Suzanne De La Monte, MD, MPH:

In vitamin D, I don't know, a high percentage of people are vitamin D deficient in this country and they need to take care of that. And I think also the fatty acids that come with say fish oil or some of these other supplements, the biggest problem is making sure that what you're taking actually has stuff in it. So those are probably the areas I would make sure were covered in issuance of supplementation.

David Perlmutter, MD:

We are grateful to our guest experts for sharing their incredible knowledge with us in this intriguing area of science that can be contentious and confusing for many.

David Perlmutter, MD:

We've learned that taking certain supplements can be a practical and certainly useful step to help us in our program to reduce risk for Alzheimer's disease. Here's a quick recap of some of the supplements discussed in this episode:

For sleep, consider:

- Magnesium
- And also consider Melatonin

For general brain health, consider:

- A good B complex vitamin that contains adequate amounts of B-12 and folate.
- DHA from fish oil or algae is also very important.
- Also remember the importance of vitamin D,
- Turmeric,
- Whole Coffee Fruit Concentrate, and
- MCT oil.
- And as I mentioned, one of my favorites: Organic coffee.

For gut health, consider:

- Both the importance of a good probiotic
- As well as taking a supplement containing adequate amounts of prebiotic fiber.



Supplements help support our bodies and our brains to make sure they are getting the nutrients and other compounds that they need for optimal health.

David Perlmutter, MD:

And since nutritional status is so important for brain function, supplements represent an important part of an Alzheimer's prevention program.

David Perlmutter, MD:

Supplementing intelligently can have a lasting impact on your health. Supplements are one way to make sure your brain gets materials it needs to work at its best.

David Perlmutter, MD:

I'm grateful that so many of these compounds are now readily available, allowing us to take full advantage of them each day.

David Perlmutter, MD:

I personally incorporate these supportive compounds into my routine and I've experienced the benefits and I hope that you will too.

David Perlmutter, MD:

Alzheimer's disease is one of the most important medical issues we face today.

David Perlmutter, MD:

We simply cannot ignore the crushing burden it imposes on our families, our communities, and our society as a whole.

David Perlmutter, MD:

If we don't spread the message that by and large Alzheimer's is preventable, we will soon find ourselves confronted with an absolute epidemic. There have been very limited advances made in terms of meaningful treatments for this devastating disease and so prevention is absolutely paramount.

David Perlmutter, MD:

And in fact, based upon what we've learned in this series, we may very well already have the power to do just that. We know far more about the workings of the brain than we did even just a few years ago.

David Perlmutter, MD:

We understand how our lifestyle choices influence our bodies all the way down to our DNA

David Perlmutter, MD:

And that we do in fact have far more control over our health destiny than we ever knew. Through this series, we have focused on the best research that shows us how Alzheimer's could well be prevented and how even small lifestyle changes may tip the scales in our favor.



David Perlmutter, MD:

As we conclude this documentary series, I want to remind each and every one of you of the empowering notion that you have the ability to determine your cognitive health. You have a say in your health destiny and there's no better time to change course for good health and lasting brain function than today.

David Perlmutter, MD:

Dr. Merzenich, I want to thank you for participating in this documentary and commend you for all the work you've done over the years and also even today, the enthusiasm that you have for getting this message out is really palpable and really very encouraging.

Michael Merzenich, PhD:

I just hope, David, that people, not just my message but this broader message of thinking about how you should be living your life so that it's a stronger life and so that it's a safer life and so that it's a healthier life and so that you are continuously producing a stronger and better you. I just wish everybody understood. I know you understand this and I know that's the message of this program, but it's a wonderful thing if everyone could understand this.

Anna Cabeca, DO, FACOG:

So whatever you're dealing with, you can have a better tomorrow, and you're worth it. You're worth the investment in yourself. You're worth in the energy it takes to do so. It will change your life. Not only that, what we look forward to as we're getting older are those healthy relationships, that we're surrounded by people we love, and they love us and we love them.

Anna Cabeca, DO, FACOG:

Having healthy relationship comes from having a healthy physical body and mental body and spiritual body. So investing in your health, in your self-care, in creating the best you can be, you will magnetize those healthy relationships around you, and you're leading a good example for the rest of us that are following suit.

Ayesha Sherzai, MD:

One of the most impactful things that I've learned about prevention of Alzheimer's disease is that you can affect your brain, any moment, every single day of your life. Every decision you make in your waking hours and in your sleeping hours, affects your brain. Everything you do either makes your brain or breaks your brain. I think that's a very powerful message. I think it gives a lot of people hope too because all Alzheimer's is a synonym for a devastating condition. But when people know that their actions determine brain health, it's very empowering.



Georgia Ede, MD:

We understand so much now about brain science and nutrition and lifestyle that we didn't understand before, we just didn't know, and now we know. And you don't need a specialist or all kind of special tests. There are very simple things you can do on your own without any kind of special help. You need to realize that it's really worth it, so you have to ask yourself, what's more important to me, continuing to eat this way and live this way and eventually come down with all kinds of chronic diseases and become disabled later in life or do I want to live healthy right up until the end of my life, which most people think isn't supposed to happen. We just assume now that our brains are supposed to fall apart and our bodies are supposed to fall apart and that's just not normal. If you eat the right way, that doesn't happen.

Georgia Ede, MD:

So I'm really excited about it because I think that every single person who's listening to this has what it takes to turn things around.

David Perlmutter, MD:

Dr. Bland I want to thank you for spending time with us today and your information has been incredibly important.

Jeffrey Bland, PhD:

Well, Dr. Perlmutter, I wanna send that right back to you because I think that we are at a revolutionary stage as we're expecting to live longer and live healthy throughout those years. So we not only extend our lifespan, but our health span. The information that you are imparting to not only your patients, but the world at large through your communication efforts and your diligence, is gonna make a real positive difference in sustaining what most people really want to have throughout the course of their years in the planet, which is cognitive function, the ability to enjoy life and to be the masters of their own destiny. So thank you very much.

Lisa Mosconi, PhD:

There's definitely hope, we're learning that the health of our brains is largely in our control, which is also very empowering because we now know what kinds of things affect the brain that we have control over and also makes us accountable. For many years, Alzheimer's was seen as a blameless disease. Like it just happens to people, you have in your genes or it's just that you're older and now instead, we really need to take responsibility for a good part of what happens inside their brains. It takes discipline, it takes commitment, but the benefits are for life.



Sarah Gottfried, MD:

What we know when it comes to your sense of health and wellness, we know that 99% actually comes down to you. I want you to feel really empowered to step into the grace of really architecting the best health and wellness for yourself.

Ayesha Sherzai, MD:

A world without Alzheimer's, what a beautiful world would it be? I think it would be a world where people would live an unforgettable life. Where people would forget about brain disease. Where people would just invest in their families, in their sense of purpose and in their loved ones. It would be a world where people actually would be more creative rather than spending time to resist and fight against this devastating disease. There's so many things that we can do today to build our brain.

Max Lugavere:

And at the end of the day, it's not a one meal or one blueberry for that matter that's going to avert or even make a dent on your risk for Alzheimer's disease. And in the same vein, it's not one meal that's going to give you dementia or Alzheimer's disease. So go easy on yourself, do the best you can and start today. It doesn't get more empowering than that. At any moment, you can change the direction of your cognitive destiny. And you're always one meal away from getting right back on track. So if you find yourself falling off the wagon, well, it's not easy. It's going to be overwhelming, especially at first, but eventually you'll get into a rhythm and it'll become habit, and you'll be shocked that you lived in any other way. So, yeah, just don't wait. Start today.

David Perlmutter, MD:

My hope is that you'll feel excited and empowered and prepared to make significant changes in your life in order to improve your brain health. With all of the information that we've covered over the last 12 episodes, and it's a lot, I feel confident that you have the necessary knowledge to significantly alter your brain's destiny for the better.

David Perlmutter, MD:

Remember what so many of our experts have told us. It's never too early or too late to start caring for our brains.

David Perlmutter, MD:

There are benefits to be realized at any age.

David Perlmutter, MD:

We know that we have the ability to control so much of what happens to our health and our brains, and I'm so appreciative that you've taken the time to find out how to use this fact to



better your life. Thank you for watching Alzheimer's - The Science of Prevention.