Protect Your Brain: Combat Gluten-Related Damage Transcript

(Transcripts are generated by AI and may contain errors)

Introduction to Dr. Osborne

Welcome back to this episode of The Reverse Alzheimer's Summit. I'm your host, Dr. Heather Sandison, and I'm delighted to introduce you to Dr. Peter Osborne today.

He's the clinical director of Origins Health Care in Sugar Land, Texas He's a doctor of chiropractic medicine, a doctor of functional medicine, and a doctor of pastoral science, which he's going to explain to us today.

He's also board certified in clinical nutrition and is often referred to as "The Gluten Free Warrior", Dr. Osborne is one of the most sought after functional medicine doctors in the country.

His practice is centered on helping those with chronic pain and degenerative diseases as well as autoimmune. With a primary focus on gluten sensitivity and food allergies.

He's the founder of the Gluten Free Society and the author of the bestseller No Grain, No Pain. Dr. Osborne, welcome. Thanks for having me. It's a pleasure to be here.

So I want to dove straight into this connection between gluten and neuroinflammation. I read a study recently. It just came out in 2023 about how they found in mice brains that just a little bit of gluten in the diet actually is directly neurotoxic and causes inflammation directly in the brain.

So something that we eat can directly impact even though this was in mice. We there's a model for this directly impacting and actually breaking down the blood brain barrier in mice.

Tell us what you've seen in your clinical practice in terms of how gluten can set us up for neurodegeneration. Yeah, great question. There are a number of mechanisms at play in that we've seen and we measure a lot of things objectively.

We do a lot of lab testing in the practice and so trying to track and see why something is happening is always very important.

How Gluten Drives Neuroinflammation

But one of the mechanisms of gluten induced neurological problems actually has to do with gluten fundamentally changing the microbiome. Right. So we get gluten induced bacterial abnormalities.

That creates an inflammatory cascade within the gut itself. And probably most of your audience or listeners have heard of leaky gut. Right. So when we talk about leaky something, right?

Leaky gut, there's a leaky brain. There's a leaky kidney. There's a leaky vascular endothelial linings. There are leaky tissues that can occur throughout the body.

There's a kind of a general trend with gluten is that it can cause a leaky barrier syndrome. So it starts in the gut. Certainly, once it gets through the gut, that inflammation can go systemically and then it can also contribute to a breakdown in the blood brain barrier.

And so part of what we've identified with gluten as far as the neurological components are, number one, changes in the microbiome. So it can actually alter certain types of bacteria.

There's some research now that I have been looking at and doing where we'll see people with common yeast overgrowth. So so let me give you a scenario.

You take somebody with gluten sensitivity. It damages certain types of bacteria in the microbiome and it makes that person more susceptible to yeast overgrowth.

So think of Candida. Candida albicans, probably the most well-researched, well-studied yeast overgrowth in humans. Candida albicans then can produce a protein that mimics gluten. Right.

So it's like, okay, now you're eating gluten, then you're creating a life form that overgrowth within your GI tract that produces a protein that also looks like gluten.

That protein is called a hateful wall. Protein or HWP. And so now you have kind of like this double gluten impact, but that's just one component. So. But yeast also will ferment your carbohydrate foods.

So as you're eating your foods, let's just say you have to bake potato perfectly gluten free. But now you have this yeast overgrowth in your gut and it's taking that potato and it's turning that potato into potato wine.

Right. That's what fermentation is. It's basically taking carbohydrates. It's using those carbohydrates for energy and then producing alcohol as a byproduct.

And that's how we make wine. We take grape sugar and we subject grape sugar to yeast. And that yeast then can ferment that grape sugar into wine. And we can do the same things in humans.

There's actually something called Auto-brewery syndrome which is where a person has a bad enough yeast overgrowth. They're going to ferment their carbohydrates into alcohol.

Now, what does alcohol do to risk for Alzheimer's and dementia? Right. Aside from alcohol being damaging to nerve tissue, directly alcohol causes B, vitamin deficiencies that can lead to a host of problems.

It leads to mineral deficiencies that can lead to a host of problems with energy production within the mitochondria of brain cells, thus reducing the capacity for cognition, recognition and functionality of the brain.

So you have yeast changing the microbes or gluten changing the microbiome and creasing the likelihood that yeast overgrowth could be a real possibility.

And so that's again, that's one mechanism. But you also have gluten causing directly an immune response. And we've seen this in schizophrenics. We've seen it with bipolar, we've seen it with people that suffer with depression and dementia where they're actually producing antibodies against neurological tissues in the brain.

So we know gluten can directly be related to the pathway of antibody production against neural tissue. So you've got gluten induced yeast overgrowth through microbiome changes, you've got gluten induced direct antibody production that can damage neurological tissues.

Then you have gluten induced malabsorption, so you get damage to the gut and that malabsorption can cause things like fat deficiencies. So people a lot of times with Alzheimer's have low Omega-3, especially low EPA, DHA, which can affect and alter how they're able and capable of thinking cognitively and clearly.

But we also have malabsorption that can occur with any number of nutrients selenium deficiency and magnesium deficiency, and B vitamin deficiency and zinc deficiency, etc., etc.

The list is long because there are 40 essential nutrients and we know that gluten induced GI tract damage can induce any number of nutrients depending on the individual and depending on other varieties and factors within that individual's choices and lifestyle.

Well, so those three things that you just described, they fit really well into the analogy that Dr. Bredesen uses, that our brain can we can think of it like a country, right?

And if that country, if my brain is done, is at war, if it's attacking and defending against the yeast or if it's attacking and defending against itself.

Right. This autoimmune process that you described that can be triggered by gluten, then we don't have the resources to go into that regenerative mode where we're building infrastructure neurons and those connections between them.

And then you also described this way that there's actually a reduction in resources. These really crucial nutrients for the brain are reduced because gluten can induce these low basically malabsorption.

So you're even though maybe you're choosing to eat the right things outside of gluten, you are not able to absorb them because of the the impact on the GI tract.

And so then even those resources that we have, if we're fighting that war, using up any resources we have plus then we're not getting enough. You can see how this is a setup for disaster and disease.

Yeah, absolutely. You can't fight your food in win. I mean, way of eating is to nourish the body, not to create a battle. So, you know, it creates quite a conundrum for people who are gluten sensitive and don't actually don't realize it.

And so these are the mechanisms by which gluten can really put us at risk. Now, talk about what you've seen with patients. So sometimes people care why it's happening, but mostly we care about how do we get this to work for us, what do we do about it?

And what have you seen your patients do? I mean, the first thing is diet change. You know, it's the number one modifiable risk factor, right? And you have 100% control over it.

And that's the good news. So, you know, some people are really hesitant to want to go gluten free because they feel like they'll miss out on the social opportunities.

They'll feel like they'll miss out on the tradition around the holidays or, you know, like birthday cake or, you know, Christmas cookies or whatever it might be.

But in reality, and this is why I generally don't just say everybody go gluten free, because the likelihood that somebody going gluten free is going to stick to the diet, to the level that they need to stick to the diet, where it actually has a profound impact, an improvement on their health is not likely.

It's a big ask. So generally what we do clinically is we we actually genetically test people. So we do genetic testing for gluten, gene predisposition.

If we find gene predisposition, we take them gluten free. And when I say gluten free, that's probably a different meaning than what most are saying. When we say gluten free, we mean grain free.

Because if you define gluten, it is not just limited to wheat, barley and rye. That is the FDA's limited definition and that is the European Union's limited definition.

But gluten is defined as the family of proteins found within the seeds of grass. So that is all grass, not just wheat, barley and rye, but it's also oats and corn and rice and sorghum and millet, which are commonly labeled as gluten free products research shows that up to 92% of people going on gluten free diets in the traditional sense, that's the wheat, Barley and Rye free version of the diet.

Still continue to have inflammation in their villi after up to five years of gluten free diet compliance.

Why Grain-Free Matters Beyond Gluten

And I discovered this very early on in private practice because I would see people initially making the change. In the first few months it was like gangbusters.

They were feeling great. Their joint pain was reducing their cognitive function was improving, their energy was improving, their sleep was improving. You name it, we saw symptomatic reduction.

But what would happen once they figured out how to do food substitution? So, you know, okay, instead of eating, you know, Cheerios over here, I'm going to eat this corn based cereal that's labeled gluten free.

And in what we saw was when people started to discover this food substitutions like that, they would go back into what I call the gluten free whiplash.

They would whiplashed backward into their old symptoms and sometimes into new symptoms because they were eating grains. And so when I when I did a deeper dove into the existing research around what actually what is gluten, what does that mean to be gluten?

What does it mean to be gluten free? Like nobody really looked at this to to the level that I did and brought it out in layman's terminology. Other researchers were looking at it.

They just were talking such geek science that nobody really understood what they were saying. And what I tried to do is make sense of it based on what I was observing clinically.

And so what we found in the literature was that there's a type of gluten in corn, for example, called Zayne, and that a lot of people that have gluten reactions react to Zayne as well.

As a matter of fact, a study in 2012 showed that celiac patients reacted worse to Zayne than they actually did to wheat gluten called Glidden. There's also a gluten in rice called Auxin.

And and it's one of the most common food allergens. Or there's a there's a term called PI's food protein induced ENTEROCOLITIS It's an acronym, and that's what it stands for.

But Rice is one of the top causes of this. And this is a this is a cause of gastrointestinal inflammation. Right. Which is exactly what celiac is. Right.

The disease manifestation of celiac disease is the autoimmune intestinal inflammation caused as a result of wheat, barley, rye, at least traditionally so.

But again, we're finding rice gluten in corn gluten and other forms of gluten are also causing very similar types of reactions in our patients. And so when we originally take them gluten free, that first few months, they're so paralyzed by not knowing what food substitutions to make that they're actually truly grain free.

But once they start figuring what those substitutions are, they start adding them into their diet and they start going backwards. So it was it was my observation clinically.

And so we started to delineate the terminology. So the way I delineate the terminology is instead of going gluten free in the traditional sense, we call that the traditional gluten free diet.

We ask our patients to go truly gluten free, which is grain free. And so now we can at least ensure they're not being exposed to these gluten based proteins that are found in all grains.

Again, the definition of of of a gluten is that it's the family of proteins found in the seeds of grass that are soluble in alcohol. And this was actually defined by another Dr.

Osborne, not me, but we call him the father of plant protein chemistry. And he actually classifies gluten originally into different classifications called patrolman's and glue lens.

And it gets a little esoteric for the average listener. So I well, I won't get into all that, but it's important that people understand there's no such thing as a gluten free grain.

So when I use that term gluten free, I'm not talking about go get your oatmeal this morning and and make sure you eat some corn flakes. I'm saying you need to be grain free if you really want to restore your brain health and reduce the inflammation that that so many of these other gluten can also cause.

This is so helpful and I have so many directions I want to go this is really exciting. So 1/1 question is testing. You mentioned testing people genetically, but the way that you're describing it, it almost sounds like everyone could benefit from going grain free.

The reason I wrote the book, No Grain, No Pain, instead of no gluten, no pain is because gluten is only one thing in grain that can be detrimental to people.

And I think that a lot of people's positive responses to going gluten grain free is more to do with a lot of these other things as well. So it's not the story is deeper than gluten.

So because again, you have gluten is found in all grains. It is it is it is it possible everyone could benefit from going gluten free? Yeah, it is. It's possible. Is it provable?

No, because you can't take everyone in the world simultaneously and have them go gluten free and measure all the outcomes and do so with with ruling out the variables, that that's an impossible trial.

And you can't do it in a double blind fashion either. So it just it makes it hard for research. Right. But I would argue that anyone with an existing autoimmune condition benefits from a grain free diet, gluten free diet, period.

I have not yet seen the case where that wasn't true. And again, it doesn't mean it couldn't be true. It's just I've seen over 10,000 patients in 22 years of practice.

And I would say that that's never been the case. Everyone I've ever tested with autoimmune disease has had gluten sensitive gene markers that predispose them to reacting to gluten.

And so, again, my population is biased because people don't come to me to say, hey, I feel great, make me feel greater. People come to me because they have five, six, seven, eight, nine autoimmune diagnoses and they're trying to figure out what they can do in their diet and lifestyle to get better because the medicines aren't working.

So but there's so again, I'm digressing here, so let me back up. So you asked, could everyone benefit from going gluten free? My my answer is yeah. It's been my observation.

If they have autoimmune disease, absolutely good. But what are some of the other things that are found in grain? They could also be detrimental to the human brain.

And so one of the factors around grain that has nothing to do with gluten is these family of proteins there. I call them plant sensory proteins because the job of these proteins is to defend the actual seed.

Remember, that's what grains are, they are seeds. And so when we look at seeds as a as a function of Mother Nature, as a function of the world around us, their job is not to be your staple food.

Their job is to preserve their own species from being eaten into extinction. And so, although they may not have arms and legs that they can fight you, they do have chemicals inside of them that can fight you.

And people don't. And doctors, unfortunately, don't. And what's the best word? They don't appreciate that as well as they should. If you ever look at Mother Nature, go watch your Mother Nature show.

Everything is eating everything else, right? It's very violent. Right. Do you think for 1/2 that that seed doesn't have

the capacity to defend itself?

If you do, then you're I would call you naive. And if you're a doctor saying that nutrition is not important to health, I would really say you're practicing in a very scary way that is going to lead to many people continuing to believe things that get them hurt and continue to perpetuate chronic autoimmune disease.

But you've got proteins in grain that are not gluten. Like like for example, there's a a class of proteins called serpent ends, another class of proteins called amylase trypsin inhibitors.

And these have been shown in research to cause damage by activating the immune system through a different kind of mechanism. Then what gluten does and these that one of the mechanisms is through what's called a toll like receptor or a TLR.

These these plant proteins can activate TLR receptors, toll like receptors in the immune cells and create an inflammatory cascade that leads to chronic inflammation.

We also know that grains can be contaminated with mold and mycotoxins the way they're stored. Mycotoxins are very neural inflammatory, meaning they damage nerve tissue.

This was there's a federal court case a few years ago, Frederico versus the U. S., where they proved for the first time in a court of law that mold damaged the brain.

And and they did so with all kinds of really unique testing and what are called neuro plant imaging, where they actually took three dimensional in MRI of the brain and showed atrophy of the brain as a result of mold exposure.

So this is found in grains like it's one of the most contaminated moldy foods that we could consume. We also know that there are pesticides and herbicides that are being used in mass.

And so you've got things like glyphosate in atrazine that are sprayed on these grains, and glyphosate is now being double sprayed. It's sprayed before and right before it's sprayed on the ground when you plant, but it's also sprayed as a desiccant to dry the crop up so that it can be harvested.

And then we also have other things in grains like heavy metals, like for example, cadmium and lead and arsenic have all been found in in high quantities in in rice.

We know that mercury has been found in grains, especially like corn. So so we have metals, we have plant century proteins, we have molds, we have mycotoxins, we have pesticides.

Now, you also add to the fact that if you look at quantitatively grain as a food, as a staple in the U. S., it represents grain represents anywhere from 60 to 80% of total caloric intake in humans.

And so what does that equate to and equates to a carbohydrate toxic diet? It's too abundant in carbohydrates, of course. Some are now calling Alzheimer's disease type three diabetes.

So when you're using grain as a staple food, it's also driving up blood sugar. I've made this observation. Colleagues like my my friend Dr. William Davis, who wrote famously wrote the book Wheat Belly, made the observation that that compound components of wheat like packed in or I think it's 4 to 8 times more glucose promoting out of the blood than than sugar, like pure crystallized sugar.

And then you also have the fact that grains, when you consume them as a staple, the ratio of omega six to omega three is very poor. So you end up getting large quantities of omega six in your diet, very poor quality of these omega three in your diet.

And that ratio imbalance drives the inflammatory process. So I know I just threw a ton of bricks out there just on the field for everyone to hear about grain.

But I just wanted to make sure that people understand that it's far deeper than just gluten alone. That's really, really helpful and eye opening. And we recommend an organic ketogenic diet for folks who are struggling with any sort of cognitive decline.

And there's been sort of a debate, we certainly see that it makes a big difference. But what you're describing makes it sound like maybe it's because we cut out grains that people benefit so much.

Keto, Balance, and Processed Food Risks

We think of the metabolic flexibility of burning ketones rather than carbohydrates or sugar, but meat and also getting rid of processed foods, which is a lot of what you're describing as well, is some of the benefit getting out the toxins that are found in super highly processed foods like the Maillard, Dextre and and the gums and all of the other things that we can't pronounce that end up in these very highly processed carbohydrate rich foods.

And I'm curious also your thoughts on legumes, but I also want you to just comment on that. Right. I think there's these different mechanisms that are proposed is why people benefit so much from a ketogenic diet.

And cutting out grains is potentially a really large part of that. Do you think it's all of it or is there more to it? I've gone back and forth because I treat people who've been on keto diets and carnivore diets and they're still struggling, they're still sick.

Yeah. So I think it's more it's always more do it. I think it's an individual story and equals one, right? Each individual is very unique in terms of how they're going to react and respond.

And I think it's important that that we when we're seeing people that we're not trying to use the one size fits all approach because although one size might fit many, you know, people will fall through the gaps of that of that mentality.

So part of what part of what I think it is, is I think some people don't need to be keto and I think keto actually is detrimental to many and I've seen that be the case.

That being said, keto can be very helpful for others. I generally where we where we find people do best if I'm again if I'm generalizing here and not not with great degrees of specificity but generalization is that you don't need to be keto or you don't need to be carnivore.

What you actually need to be is balanced. And what does that mean? That means grain free where you're getting carbs, fats and proteins as an equal distribution of your macronutrient ratios.

So approximate a third of your calories from carbohydrates, a third from protein, a third from fat. And that the rule with that equal third distribution pattern also needs to fall under the auspice that it's all real food, that it is not processed food that way.

You're ruling out any kind of potential reaction to dyes or preservatives or gums or pesticides or other things that might also be contaminating what we're calling food.

Because I think part of what where the problem is is we defined food and then the US government allowed for the grass listed generally recognized as safe food, additive ingredients to just be grandfathered.

And so all these chemicals that are grandfathered into being called safe, there's no data on whether they're actually safe or not. There's there's just the data that says that if you eat them today, they won't kill you tomorrow.

And that's not the same thing. Right? Because it's just like with cigaret smoking, you don't smoke a cigaret today and have lung cancer tomorrow. It's the chronic, persistent, consistent use over time that leads to the detriment.

And none of that has really been studied in the food industry except for actual real food. And we have, you know,

thousands of years of of humankind historical data saying if you eat real food, that you generally don't see the chronic degenerative autoimmune inflammatory diseases cropping up.

And I'd say who kind of going to catalog that probably best in modern times is Western Price. The dentist who you know, who traversed the globe looking at indigenous tribal peoples and found that within one generation of the introduction of processed foods, cavities shot up it, diabetes shot up, inflammatory re disease shot out their jaw sizes changed, their jaw shrank, their teeth became crowded like he documented very, very well.

All the detriment of processed food. And shortly after that, Pottinger Francis Pottinger, documented in animal studies predominantly with cats, is really great read compliant cats for anyone interested in reading the actual work.

But what Pinder did was he took three groups of cats. He took one group and fed them a carnivores diet, which is what cats are. They're carnivores. He took another group and he fed them a all processed food diet, and he took another group and he fed them a mixture of carnivorous and processed food.

And he followed these cats for three generations and documented the changes in what he found in the all carnivorous group is robust health and what he found in the all processed group was they were infertile by the third generation.

The cats had mange, the males were acting like females, the females were acting like males. Their bone structures had changed even to in terms of their physicality.

The males were starting to look like females, of females were starting to look like males. And so you saw the same changes in the mixed processed and in Carnivore risk group, but to a lesser degree, and I look at where we're at in humankind.

I mean, we can't do that human study ethically, so nobody's going to do it right. But where we are, I mean, we're confused about gender. And I don't say that, but this is not a conversation about whether I believe it's right or wrong to be gay.

I believe you are. You are. However, I also believe the influence environmentally of foods and the chemicals in foods and the estrogens that we're being exposed to today have certainly impacted the sexuality of our population and how our population is feeling because these things act as hormones.

So I think if we bury our head in the sand about that, I think we're naive and fools. Now, all that being said, going back to the point which is processed food in these carts led to infertility and a subsequent demise. Right.

So me what you follow that down. It's trajectory to the end state of disease. What you're left with that infertility is you're left with death of the species.

And so I think we have to recognize that we're seeing a deterioration of humans as a result of many things convening on our food. But if we're really trying to reverse it, we have to recognize that what we put in our bodies, what we put in our mouth is fundamental to our health and gluten.

And what's in grain plays a big role in that. And I have not seen one dietary change that was more prolifically powerful at reversing what the rest of the medical community says is not reversible.

And I've seen you know, I've seen rare autoimmune diseases go away. I've seen common autoimmune diseases go away, you name it. I've seen it improve or go away completely, all with diet change.

What does that tell me? That tells me that the illness is in the food. It's not just in the food, but a big part of it is in the food. And because food is the one, the number one thing that we can viably change and we have 100% control over to change, it is the very first thing that people should be looking at in terms of outcomes.

So I want to go through a typical day and what you recommend your patients eat because this is where some

people get hung up. But particularly in our population, we've been told that fats are bad for us and that grains are really what we want to make are that food pyramid, right?

The foundation of that food pyramid in the eighties and nineties was grains was 8 to 12 servings of grains a day. And so as we start to flip that on its head and we add more protein and different types of carbs, I want you to take us through like a practical day, somebody going to the grocery store, somebody is making food at home.

What are what are the carbohydrates you recommend having? What are the proteins? What are the fats? What does that look like? I mean, in any variety that you could imagine and any variety that's in season, I recommend that we follow the seasonal pattern of eating where what's available and in-season in your local geographic areas, what you should focus on.

So join a local co-op and support good farmers who are doing it right, who aren't poisoning your food supply. You know, to do that, you have to let convenience go.

You know, do not do that. You pay a convenience tax and the convenience taxes, the demise in your health. And so if you're willing to pay that convenience tax, and that's your choice that you get to make, but the reality is, if you eat with the season and you eat just wholesome, real food, you'll be just fine.

Most people will. Now, there are people that are also allergic to different things, and we will see, you know, food sensitivities or food allergies and folks that, you know, I've seen you know, I had a case of a little girl one time.

She's nine terminal, six months to live. She was gluten sensitive and she was allergic to blueberries. And, you know, she of course, she was eating gluten.

And every morning her mom would make her a blueberry smoothie. Well, we change those two things about her diet. We saved her life. I mean, that was 20 years ago today.

This little girl's graduated college. She had six months to live. Today, she's graduate of college to diet changes. Right. So it's it's powerful. And and so you don't have to make it complicated.

I think where people find that it's complicated is they realize that if they're going to be healthy, that they have to dedicate time and attention and effort in knowledge to understanding new recipes in a new way of eating.

They have to be willing to give up the fast food line. You know, the water Berger line in the morning. Sorry, that's you're not going to achieve health doing that.

And anybody telling you you can or you will is a liar. And, you know, we could we can say, look, historically, there are several things we could point to historically as a as a corollary graph to human health decline.

Fast food is one of them. Restaurants were rare when I grew up. Restaurants were rare when I grew up. Today, more people eat out. They need at home. We can correlate restaurant numbers and growth of restaurant business and industry to chronic general disease.

We can correlate quantity of vaccines to that, given it to children. To that same graph, we could correlate quantity of exposure to pesticides.

Practical Eating Strategies and Cost

To that same graph, we can correlate the use of grain as a staple foods from the 1940s, 1943 to that same disease graph like in a lot of people say, well, correlation is not causation.

Yeah, but correlation is proof and evidence that we need to look out a lot more closely. And you didn't have the disease levels that you had or that you have today before those things.

Right. You can also draw a corollary between the 3000 chemicals that are on the grass lists that have been approved for putting in our food to to that same list.

So I think humans are basically there's an assault on our health through our food that people have outsourced the production of the most important thing that that will register their vitality to companies who don't care about their vitality.

And many of these companies actually profit as a result of a deterioration in your vitality. You see what I'm saying? And so if you like, if you look at Big Agro, they're in bed with pharma.

If you look at pharma is in bed with medicine. Medicine is no longer owned by mom and pop doctors who run small practices and are just out to try to help people feel better.

Their corporate run, you know, businesses with interlocking corporate directorships between them. So you've got folks that are on the board at big agro companies that are also on the board at Big Pharma, companies that are also on the boards of big hospital corporation companies, and they're all patting each other on the back.

And feeding frenzy is all about profit and it's all about, you know, let's make as much as we can and let's, you know, let's let's not prioritize the values of of human life in health care.

Liz, prioritize the values of profit over those things. Or the environment. Right. These are all ultra processed food is very, very hard on not only on our bodies but also on the planet.

And so, so fascinating. I do want to just go back and like pin you down. And what I'm going to do is I'm just going to go through a day because you're right, it doesn't have to be complicated.

But I want people to go home with the practical things that they can put into place today. And many of our listeners are females who are over, you know, over 65 or about to hit that and concerned about frailty.

Right. We don't want to lose too much weight. And I think a lot of people associate those weight, those grains with how they maintain healthy weight. And so they're scared to go keto or, you know, in this case even go grain free.

So just like, let's go through meal by meal. So a great breakfast. Fantastic, super. Happy. You'll have tons of of great resources and we add recipes every month.

I have a professional chef who cooks and does things and we try to get them to do easy things and we try to get him to do nice things. So like there's a nice variety of breakfasts, lunch, dinners, etc.

As far as Nightshades are concerned, some people need to avoid them, some people don't. But I wouldn't make a statement that everyone needs to avoid nightshades the way of the way people quantitatively need to avoid gluten dairy.

We keep dairy out of people's diets for the most part because of its ability to mimic gluten. There's some evidence now showing that casein, which is the protein found in dairy, one of the primary protein constituents of dairy, actually has molecular mimicry with gluten.

So if a person is new to the gluten free diet and they're just navigating this, a lot of them do better when they go dairy free to. Right. And if they don't go dairy free, they a lot of them tend to continue to struggle and continue to suffer.

So initially, I would say at least for the first six months, you're better suited to be dairy free if you're going gluten free initially. Yeah, this is another thing that comes up a lot is wanting to give people really great dietary advice, and then it's about access and it's about cost as well, right?

So organic is going to be more expensive. That's not what I mean. I'm talking about when you eat healthily versus

eating out the quantity of dollars you will save overall you will you most of the time on our analysis cost analysis and it's a break even proposition where where you actually lose is if you're going to places some people call a whole paycheck and whole foods because it's just more expensive.

They have a reputation in a name. So you're going to pay anywhere from 20 to 50% more than you could find it at, say, other other retail outlets that maybe are not quite as popular or famous.

You could join a local food co-op and you could get a ton of great local grown organic produce for half the cost. Right. So there are a lot of ways to save money in that regard. I think.

I think people jump at the cost issue when they're new to it because they're gawking at, you know, oh, these strawberries are $7. Great. And these non-organic ones are $2.

A great. I just can't justify the $5 difference. And look, if you're healthy and you feel good, I don't you know, I don't fault you that, you know, you're trying to be budget conscious or whatnot.

That's smart because money is important and it's, you know, understanding and having conversations about what a person can and can't afford. That's an important step in life as a general rule of thumb.

But, you know, when you're talking about your health and you own $1,000 iPhone, but you won't buy organic, I'm sorry, that's a priority issue, not a cost issue.

And people have to start learning to also to prioritize what is important. If your health is important, then you will sacrifice some of the other things that may be maybe you're using as as I don't know, as as things that you will are willing to spend money on, but that are not 100% area essential.

And you reestablishing your health. And I would say the quickest way to deteriorate your ability to make a good earning or good living for your family is to be chronically ill.

The cost of being chronically ill far outweighs the cost of buying organic food. And there's so many ways you could break down that cost analysis. And, you know, organic means every and it even wins when you compare it to restaurant food dollar for dollar as opposed to looking at the long term consequences like long term, it obviously it wins hands down.

But in the in the in the immediate now, it actually isn't any more expensive. And then I think you mentioned having a chef access to a chef, right. So many people. It's a time issue.

So when someone is going grain free, many of your recipes, I'm assuming, are quick, are quick and easy but do you have any other recommendations or strategies for how to make this less time consuming?

Bulk cooking, you know, is what is what a person I bulk cook every Sunday personally in my own life. Right. And so it makes it a lot easier. So, I mean, that's just an example, but bulk cooking is a time saver.

You could also do where you make a recipe, where you make a lot of a particular recipe. We do this a lot with like beef stew where we'll make like three or four batches in a big a big crock pot, and then we'll have that for many, many meals, you know.

So there's a some some would argue, well, I get sick of the same foods or I want more diversity in my diet. Yeah, you could argue that I'm not I'm not going to disagree with you, but, you know, you you can either save time by both cooking and cooking a lot of the same things, or you could dedicate time, you know, to cooking on a regular nightly basis as well.

And either one of those strategies is fine. But from a time saving perspective, if you're if you're really trying to shave down the bulk cooking. Yeah, we freeze a lot as well.

Key Nutrients for Brain Health

So we'll make, like you mentioned, a Stewart Chili and we'll put it in Mason jars, put it in the freezer and. Then a few weeks later we can pull it out, put it in the fridge and it's thawed by, by dinner time.

And that's another, another strategy. So you can keep it fresh and mix it up. And we will often add greens to anything, just add extra greens when we're prepping something for just that night.

So it does feel fresher, add extra spices or something that mix it up. So coming back to Alzheimer's specifically, you recommend some top supplements or maybe not even as supplements supplements are, sometimes they put them in that highly processed category to use supplements to be supplemental.

But if you can get these things from your diet, even better. So you talk about some of the top nutrients to reduce your risk of Alzheimer's. Would you share that with our audience.

Which is a lot is 40 essential nutrients. Right. So what does that mean? That means there's 40 different nutrients that your body cannot produce on its own, that you have to consume by eating the right foods.

And so, you know, you know, most people have heard of the B vitamins. Most people heard of minerals. Right? So like things like calcium, magnesium, zinc, selenium, chromium, copper, etc..

And then you have fat soluble vitamins like vitamins A, D, E and K, and then the fats, omega three fats and the omega six fats are essential. So getting those in is the best way to do that is eating seasonally and eating a variety and eating, you know, going back to that rule of thirds.

If we look at nature, everything is always about balance, always. There's not an example you can give me a nature where the opposite of balance is the standard rule.

Okay? It's always about balance in nature. And so a third, a third. A third is where I like to really funnel people because that at the very least gives them some degree of balance.

Okay. And if your diet is balanced in that way, you'll get a lot of those nutrients. But what are some really critical ones? I'd say with cognitive decline, one of the biggest ones that I see is omega three.

And that's not just DHEA. A lot of times people call the brain fat because it's it's very critical for cognitive function and for white matter in the brain.

But EPA is very critical as well because of its anti-inflammatory properties. EPA regulates the inflammatory cascade and of course, Alzheimer's, dementia.

This is these are planetary processes. So you need those omega threes to properly regulate inflammation in the body. You also, very importantly, need vitamin B one.

And they're actually are clinical trials on vitamin B one and cognitive decline in clinical trials in both animals and in humans, showing improvement in dementia scores with higher doses of vitamin B one.

Now there's a kind of vitamin B one. You certainly can eat vitamin B one. It's found in meats. It's found in green vegetables. So green beans are a good source of vitamin B.

One is an example, but there's a special type of vitamin B one called Belfort Diamonds. And it's a fat soluble vitamin B one that they're using about 300 milligrams in clinical trials in humans, too.

And then they're measuring cognitive outcomes by using different batteries of tests to see, okay, do we improve cognitive function in these individuals?

And the answer is yes. Now, so far the trials have been limited. There's not it's not like we've got 100,000 people going through a trial, double blind, randomized, placebo controlled trials.

But the earlier. I stages double click on that real quick. The reason why is because you cannot patent B one, you can't patent Ben for timing. So no pharmaceutical company is going to spend the billions of dollars that it would take to get that through phase three clinical trials because there's not a profit margin on the other side of that.

Right. So I think some. They'd have to share their profits with everyone else who could also produce the same vitamin and make the same, you know, and basically take advantage of the research.

The pharmaceutical company would be doing. But said some people don't understand that the reason pharmaceutical companies are they're basically incentivized to put the effort and the money and the time into those trials that it takes to get things across the FDA finish line because there's a huge profit margin on the other end and for supplements, for herbs, for natural things, for dietary changes, you won't see those trials happening.

So even having some trial with with 100 people or some smaller amount of people, that's still really helpful because what it can do is help us assess the risk rate.

So if this there's very little risk and not very high cost, then it's probably something worth trying potentially at home. Now, talk to your doctor, but definitely something worth considering.

So thank you, Doctor Osborne. I just wanted to make sure that people understood that context. Yeah. I mean, research based medicine doesn't exist. You have profit based pharmaceutical research on patentable medications only, and that unfortunately stifles true knowledge from ever really making it out of the out of the cloud.

So unless you're up there living in the clouds with people like myself, who all we do, we study, we research, we apply, we study, we research, we apply to me, if you if you're dismissing vitamins and minerals as you know, as a lack of for a lack of research, I think you're missing the boat.

It's not a matter them not being effective. In my experience. It's a matter of us not coalescing enough clinical trial data to be able to make claims where the FDA won't or the FTC won't come and take away your license and shut down and shut you down, because that's really what it's about. It's about the threat.

The Federal Trade Commission doesn't allow you to say certain things. It's why when you look at a at a supplement bottle, it says this product is not been this or this claim has not been investigated or approved or authorized by the FDA, blah, blah, blah.

You see that long line of, you know, it's basically lawyer speak. We're saying, hey, we can't make claims that this vitamin can do X, Y or Z, even though all the research in animals shows that it does that very thing.

And even even though that we may have even human clinical trials that show that it does that very thing, we still can't make that claim because it doesn't fit in.

Check off all the FDA approved boxes. So anyway, Ben, for timing is definitely something that I think your audience would want to look into and read the studies, read the studies that are out there that are available and make a decision as to whether or not you think it's the right move for you to take.

But if I was early onset dementia, I would certainly be entertaining. 300 milligrams have been for thiamin a day for myself personally. You know, that being said, there are a lot of other things.

There's magnesium. Magnesium is it's really interesting. My studies on magnesium improving cognitive function dramatically, especially magnesium three and eight, which is a type of magnesium that is attached to the three and eight molecule.

It can pass through the blood brain barrier more readily than other forms of magnesium. So, you know, that's

another option that, you know, are another potential possibility that, you know, your audience can look at and make a judgment call as to whether or not they're going to make an attempt at taking magnesium in that way.

I would just caution anybody using magnesium three eight for the first time. It will cause can cause ninja dreams that it just what I mean by that ninja dream is very, very vivid, very realistic dreams.

And some people who are prone to nightmares might wake up in my cold sweats because the dream felt so real. So just be aware of that and taper your dose up if you're going to use it, be aware of that.

Start out at 100 mila 100 milligrams is an hour or so before bed and then, you know, work your way up. It's safe. It's just, you know, if you're prone to very, very vivid dreams already, it can make them even more vivid in that for some people can be disturbing if they're prone to nightmares.

So thanks for the heads up on that one. Yeah. So, so there's that and then there's the battery of other B vitamins, like, like folate and vitamin B12 and vitamin B6 and vitamin D2.

These these B vitamins are very critical for the regulation of a chemical called homocysteine. And so one of the risk factors for the development of cognitive decline is elevations in homocysteine.

This actually been pretty decently studied. We know homocysteine is neurotoxic. So keeping your homocysteine levels below nine and so you can ask your doctor to measure homocysteine.

It's a very easy test to ask for. It's a simple blood test they can run when they're doing their standard workup. The CBC and the chemistry panels. And if you're above nine, you can use B12, folate and vitamin B6 in combination with each other.

And it's has a homocysteine moderating effect. And so it can pull that homocysteine if it's elevated down to that under nine range. There are other things that can elevate homocysteine beyond that.

Like if you have a preexisting chronic kidney disease, there's some other nuanced factors. But as a general rule of thumb, those B vitamins are very helpful.

Vitamin B three, very, very powerful. We can thank Dr. Abraham Hoffer, one of the he was a psychiatrist who coined or helped to coined the original phraseology, ortho molecular.

That actually was Linus Pauling. But Abraham Hoffer is one of the doctors who really, really elevated it. What that means is right molecule, ortho molecular right molecule.

So he was an ortho molecular psychiatrist and what he found in his schizophrenic patients is high doses of vitamin C mixed with high doses of niacin would actually, in many cases, lead to tremendous improvement and neurological deficits that they were experiencing with depression and bipolar and schizophrenia, schizoaffective disorder.

So we know those nutrients play a major effect factor, play a major role in brain overall brain health. His theory was something called the Adrina growth theory, which is humans have a byproduct of adrenaline.

Production is something called adrenochrome, which is a hallucinogenic compound that can cause schizoaffective disease. So you're imagining things. But niacin could actually help your body break that chemical down.

So again, when we look at dementia and Alzheimer's, sometimes these people are also hallucinating. Right. And so it's not very clear cut. A lot of the diagnostic criteria for Alzheimer's is subjective.

Right. And it's in it's batteries and tests and memory. Many mental examinations that doctors will perform or other cognitive batteries that they'll perform to assess a person's mental status.

Where to Learn More

And these are subjective tests. They're not objective at all. So most of the times the died, the actual actual true diagnosis of Alzheimer's is made on autopsy.

Right. I mean, that's where you discover abnormal fold folded proteins and things of that nature, what they call tau proteins. Anyway, I'm digressing too far afield, but my point is, you have a lot of different nutrients.

The B vitamins, magnesium, omega-3's are really good ones to start with. Are there more? Yeah, there's lots more. What I would really encourage people to do is test there's there's a type of micronutrient test it can be done called intracellular nutrition analysis where you're actually measuring deficiencies for these nutrients in patients or people that they just want to know, hey, where do I begin?

You know, if I have which deficiency do I have, which one do I need to be focused on for myself? Because otherwise it's just kind of generic, you know, try these things, right?

But if you really want to get nuanced, ask your doctor to run an iron on you and intracellular nutritional analysis test where you can actually observe and find out what micronutrient deficiencies you have and then you can eat food accordingly and you can supplement accordingly also if necessary.

This has been so helpful, Dr. Osborne. I've been really really fascinating stuff that you're doing. I can just tell how passionate you are about the research and really finding true solutions for your patients, and it's just a pleasure to have this opportunity to get to learn so much from you.

So thank you. I want everyone to know how they can find out more about you and your clinical practice. So if you want to find out more about about me, you can go to glutenfreesociety.org.

And that is our our basically that's our platform for everything gluten. So we talked a lot about gluten today. If you want to learn more about gluten in dementia, gluten in the brain, we've got lots of videos and articles there.

Thousands of of articles and videos and lots of recipes and other resources on the Gluten Free diet. If you want to just learn more about my clinic and about what we do and what online nutrition, you can go to Drpeterosborne.com and thats Drpeterosborne.com. Fantastic.

Thank you so much for joining us. Thanks for having me. It is a pleasure.