## Introduction and Amy Bergeru2019s Background

Welcome back to the Reverse Alzheimer's Summit. I'm doctor Heather Sanderson, and I'm so excited to be here with Amy Berger today. She has written a book that I have sitting at home on my kitchen bar where we have been.

My family and I have been flipping through it, getting great ideas, learning lots of smart questions with my 13 year old. So it's been really fun to stumble across her work and my effort to find to bring you true experts in Alzheimer's in reversing Alzheimer's.

So Amy is a US Air Force veteran and a certified nutrition specialist who specializes in helping people do keto without the crazy. We need more of that.

She has a master's degree in human nutrition and writes about a wide range of health and nutrition related topics like insulin metabolism, weight loss, diabetes, thyroid function, and much more.

She has presented internationally on these issues and is the author of The Alzheimer's Antidote, The Stall Slayer and End Your Carb Confusion. I can't wait for you to learn as much as I have from Amy.

So welcome to the show, Amy. Thank you. Happy to be here. So I was telling you right before we hit record just how excited I am that you have this expertise in the ketogenic diet and nutrition, and you are combining that with really providing some solutions for Dimension Alzheimer's.

There's a lot of confusion in this space. You know, there are still doctors telling people that if you have dementia, you should be on a low fat diet.

So where do you. Can you tell us about kind of where that confusion comes from and why you have really settled on keto being one of the answers? Yeah, I, I honestly can't speak to why anyone would specifically recommend a low fat diet for Alzheimer's disease.

I mean, I, I came into the ketogenic angle because I, I already sort of specialize in ketogenic and low carbohydrate diets. But when I was looking into the Alzheimer's research, what absolutely blew my mind is the most fundamental aspect of the illness that is never talked about really in conventional circles, and that is that this disease is a fuel crisis in the brain.

It's an energy shortage in the brain, in the brain of somebody with Alzheimer's. The brain is no longer able to metabolize glucose properly. So it's it's as if these cells are starving to death.

Well, if that's the case, then wouldn't it be great if there were some alternative fuel that we could give to these struggling neurons?

## Alzheimeru2019s as a Brain Fuel Crisis

Like if they can't use glucose. Okay. Can we give them something else? Oh, what do you know? There's these things called ketones that are produced in the body when when you eat a very low carb diet or just when your insulin level is fairly low.

The body generates ketones as a byproduct of when you are metabolizing fat. And these ketones are a really great fuel for the brain. So right there is at least one rationale, and there's many others.

But that's the main rationale for using a very, very low carbohydrate diet to to fuel the brain. And so sometimes day diabetes and Alzheimer's they get kind of come together.

Alzheimer's can be caused called type three diabetes. There's type one autoimmune type type two which is more of the adult, what we used to call adult onset.

Although it's happening in kids who can consume too many carbs or sugars and then now, you really draw the leg. You connect the dots directly between high glucose, high insulin, and Alzheimer's.

Can you speak to that a bit more? Yeah, you you just said the magic word, which is insulin, because, you know, if. Why would a nutrition professional have anything to say about Alzheimer's disease as well?

They do they do regularly refer to Alzheimer's disease now as type three diabetes or diabetes of the brain. I've even heard the phrase brain insulin resistance.

And if anyone watching is familiar with the term metabolic syndrome, metabolic syndrome is this cluster of issues that come from chronically high insulin?

You don't even have to have high blood sugar, high blood glucose to have metabolic syndrome. That's only one of the criteria. They look for. But so the I was saying the metabolic syndrome because the associations now between insulin resistance, diabetes and metabolic syndrome and cognitive impairment are so strong now that you can actually look in the medical literature and you will find papers with the term metabolic cognitive syndrome.

And so when we look at insulin resistance or metabolic syndrome or diabetes, there's no organ or gland or tissue system that is not affected, right. In PCOS it's driven by chronically high insulin.

It's the ovaries in the nonalcoholic fatty liver. The eye damage the kidney damage. It's the entire body. And yet we dismiss the mere, even the possibility that the brain might be affected by all this.

Like like we don't even think of that. And, as much as I love the phrase type three diabetes, because right away it suggests, oh, this maybe this is a blood sugar kind of thing.

It misses the mark in that there are millions of people, and that's not an exaggeration. Millions of people whose blood sugar is normal. But the blood sugar is only normal because it's being kept in check by sky-high insulin.

And so they've some of the studies they've done on Alzheimer's patients and prospective studies looking forward, people that have chronically high insulin are at massively increased risk for all timers, even when the blood sugar is normal.

So I cannot emphasize that enough. You do not have to have type two diabetes to develop the type three diabetes in the brain. Yeah, I was shocked when I went to a conference and there was, an expert on diabetes presenting at an environmental environmental medicine conference, and he was talking about how insulin is really responsible for about half of the symptoms and the kind of the progression of disease, the, the destruction that happens in type two diabetes.

And so if we just focus on the sugar, we're really missing half the picture. Now, in the event that there's no insulin like in a type one diabetes situation, you of course you need some insulin.

But it's about balance. And I love that you speak to this, quite a bit. And one of one of the things around the ketogenic diet is the way I think of it anyways, is it's this balance in our metabolism between burning sugar for fuel and burning fat for fuel, and that really our bodies are designed to do both, not be stuck in one, not be stuck in ketosis as much as we love it.

## Insulin Resistance, Type 3 Diabetes, and Ketones

And it's great healing not to be stuck there forever, but also to not be second, glycolysis, glycolysis or excuse me and burning sugar for fuel forever, which is the way most of us are.

So can you speak a little bit to ketones and how they're used as an alternative, fuel source and how this can be helpful? Yeah. First, let me echo what you said.

I mean, as much as I recognize how therapeutic and powerful ketogenic diets are that not everybody needs a strict ketogenic diet, I mean, there's billions of healthy, lean, robust people all around the world that eat starches, and they eat fruit and they eat beans.

So not not everyone needs keto, but certainly it's it's a very, very powerful diet, a dietary therapy. So, I just think ketones are kind of it's a natural state for the body to be an even if we wouldn't expect the body to be in ketosis all the time.

I think naturally cycling in and out, even if you eat seasonally, I mean, human beings are. Now we live all over the world and we have food available out of season all the time.

But looking historically from an evolutionary perspective, we probably wouldn't have been eating a lot of starch all year. You know, every day, every month, all year long, we would have been in and out of periods where there were more carbohydrates available and fewer.

So we would have kind of been burning a little more fat versus burning a little more glucose. And, we've just sort of upset the balance now that so many of us eat carbohydrate all day, every day, that we're constantly in that mode, we never give our bodies the chance to really get into a good, fat burning state and produce those ketones.

You know, the ketones really only come when you are breaking down a lot of fat. And so you can you can produce ketones a lot of different ways, but that's kind of the easiest way is to just get the carbohydrate really, really low in your diet.

Your body's going to because there's just not enough carbohydrate fuel. It's going to switch over to getting most of its fuel from fat. Whether that's your stored body fat or the fat in your food.

And as a result of breaking down that fat, the body's going to make the ketones. And then how do those ketones interact with neurons? So in, in, I mean, in Alzheimer's disease specifically, but really in any in a healthy person, in any body, different cell types can use different types of fuel.

You know, any cell that has mitochondria, there's there's a select few types of cells in the body that don't have mitochondria. And if you don't have mitochondria, you can't burn fats and ketones.

They are literally off, you know, burn oxidized in the mitochondria. So, but neurons, you know, any other type of cell that has mitochondria can burn glucose, it can burn fatty acids, it can burn ketones and form.

So like I was said earlier, in Alzheimer's disease, we know that the underlying problem is that the brain is not taking up and metabolizing glucose. We don't know why that's happened.

Like we that's the problem. We don't really know what the full cause of it is yet. But regardless of what that cause is, the most promising thing that I'm aware of in all of the Alzheimer's research now is that even though these neurons are not able to take up and use the glucose, they do take up and use ketones, and that this can at least partially correct for that gap in fuel.

And, I have to recognize the work of Doctor Stephen Cronin and his group out of, I think it's Sherbrooke University in Canada. They just do the most amazing research with this, with, you know, moving beyond the rats and the petri dishes and the mice doing research in actual humans with mild cognitive impairment, with Alzheimer's.

And the getting the ketones really does have a positive effect. So what are some of the things that, your clients might run into in terms of challenges?

Getting started on a ketogenic diet? Well, what? Don't they run into it? Most of the people, most people who come

to me are actually interested in keto for weight loss or diabetes or more of those other kinds of issues.

Unfortunately, most of the people that come to me for Alzheimer's are the adult children of an older parent who's already institutionalized. And if you are not in control of their food or their routine and their environment, there's not a lot you can do.

But overall, the I mean, the challenges people run into there, there's so many, some some that are out of their control and some that are within their own.

You know, sugar is very addictive. Am I challenge anyone who thinks that sugar addiction does not exist? You just try to go with, go without it for a month, go without it for a day and tell me it's not addictive.

So I mean that we we all have some degree of of addiction to sugar and starch. For some people, depending on the situation, they, they have to wrap their mind around maybe the possibility that a lot of the nutrition advice they're used to hearing through the years is not correct.

You know, they're they've been made afraid of saturated fat. They've been made afraid to consume red meat. They're afraid to consume old because of the the butter and the cholesterol.

But with Alzheimer's, I think the, the other obstacles, unfortunately, people face. And it's not just all Alzheimer's is that their own medical care team will actively try to talk them out of doing it.

They will actively fear monger about eating more fat or not, and not eating those quote unquote healthy whole grains. And I think that's one of the biggest obstacles is when you think that there is something that is really worth trying, and your own doctors are saying, no, don't do that crazy diet.

So I'm so glad you spoke to, you know, people who are institutionalized with, dementia or in senior living facilities. The typical diet is a standard American diet, very high in carbohydrates and not organic.

I'm certainly a fan of organic.

## Practical Keto Challenges and Getting Started

Getting those toxins down and really, what you're speaking to is why I created Morava, which is the residential care facility for the elderly that incorporates and creates an immersive experience and the Bettison protocol.

So the reason that we did that was because of how just how challenging it is to do this on your own when you're suffering with cognitive impairment. So if if you are I mean, for people who are normal cognitive, who have all of their cognitive capacities, changing your diet, changing the way you shop, changing the the meals that you cook on a regular basis, where you might go and get a quick meal when you're in a rush.

All of those things, impact, you know, how you eat and just changing that for someone who has all of their full capacity is challenging. So then when you go to ask someone with cognitive impairment who maybe it's limited because they don't drive as much anymore, so they can't get to that grocery store that's a little bit further away.

Or, you know, they don't have all the new gadgets that make it a little bit simpler and easier. They've never heard of avocado cow mousse. These things are very they feel almost boring.

It's very, very challenging. And making sure that, like you mentioned, that the healthcare team is all on the same on the same page at Marama, we are licensed by the state of California, and the ketogenic diet is a medical diet.

So we are deviating from what the state of California basically the laws are in terms of how seniors are fed, even though we know the science tells us it's the best thing for someone's brain.

The state of California has a law that's that's basically counter to that. And so we have to have a medical team

that's on board with us that then recommends or prescribes a ketogenic diet, which is basically the system that we've set up.

But I'd love for you to speak to if you have any tricks for how to get anyone to kind of change the if there's hacks or how to how to just get started on the ketogenic diet.

And do you have to fully commit, do you how can you go a little bit in that direction and get better at it, or do you need to go all the way there? Right.

So a lot of that depends on the situation. But first let me I'd like to address some of the stuff you were saying before. I think it, it is tragic really is the best word is tragic what our elders are fed and what our institutionalized loved ones are fed.

And it's it's through no fault of the institution. I mean, some of it is, but if they're receiving government funding or they they may be literally beholden to certain guidelines, like these people are not allowed to have this much fat, or they have to have this much vitamin C or the these regulations that they, they are boxed into if they're being funded by a certain system.

And I but I'm so glad you asked what you asked about how to make it easier or how to do this in the real world, because I think people that don't really understand how this works.

I think that it has to be very complicated and expensive, and you have to have this meter and you have to do all this stuff and all these gadgets, and the real truth is what makes a ketogenic diet work, meaning what gets your body to produce the ketones that we want so badly for the brain is one thing, one thing only, a very, very low carbohydrate intake.

So your you don't have to overhaul your kitchen. Guess what the roast chicken and potatoes that you are used to making anyway, you keep the chicken exactly the same.

You just roast cauliflower instead, or you roast brussel sprouts. You just make these very easy substitutes. A burger on a bond. Hey, guess what? Same burger, no bun or use make a keto friendly.

But if you want to get ambitious and use the almond flour, cookies and all that like the keto has become so popular lately that there are substitutes available now, you know I'm not a big pasta person, but if you are, ten years ago, you would never have been able to find premade zucchini spiral noodles at the store.

Now you can get them in fresh or frozen. You can get riced cauliflower like this stuff is there. And so, you don't have to completely, radically overhaul the way you do things.

You can even you can dine out, you can eat at restaurants, just steak and broccoli, you know, to Cobb salad, like like no croutons. It's easy. You just have to have a little bit of information as to how to do this and how to customize your order.

Then with with your other question, the, you know, do you have to be all in or can you kind of do it a little bit? That really depends. It depends on the person's situation.

The sicker someone is, the more severe someone's situation is, the stricter an approach they need to get out of that situation. You know, when when we were saying before that keto is not everybody needs a ketogenic diet, I get asked very often, do I have to do keto to prevent Alzheimer's or like it's, you know, I'm 75, I've been eating junk my whole life.

Is it too late? And I first of all, I always use the word potentially with prevent. We we don't know that we can prevent Alzheimer's. I believe that we can, but we can't say for sure.

So to potentially prevent it, I don't think you need keto. I think you have to eat and live in such a way that keeps that

blood sugar and insulin within a healthy range.

Not everybody needs to do keto to do that. The amount of carbohydrate that anybody can eat and still remain healthy is very, you know, individual. So I think if you are specifically trying to get ketones to the brain in someone who's already impaired, I don't think you want to dance around and dabble.

You have to be in it. If you just want to lose 10 pounds or you just kind of want to feel better, you might have a little more flexibility. But, you know the other thing, too, and I don't know if I'm getting ahead, but if you look, like we were saying before, people that are institutionalized, but even if somebody is not, even if they're in the home where somebody is able to prepare their food for them, they it's it's hard.

Like, like in the best case scenario, it's it can be hard to do a very low carb diet, let alone when somebody's impaired or they're belligerent. They, they don't know why they can't have their morning bagel.

Why are you making them have these eggs cooked in coconut oil? So there are ways to get ketones without a ketogenic diet. And that would be stuff like MCT oil or, what they're calling all the exogenous ketones.

It's basically like a supplement that you can take. That's ketones, where even if you are not cutting your carbs, you can still at least feed that starving brain.

But those other things, the MCT oil and the exogenous ketones do provide that fuel, but they don't address the underlying metabolic problem, whereas the ketogenic diet does.

The diet is going to improve that glucose insulin stuff. That's incredible. And it's it's really necessary. I, I appreciate what you're saying. If you have progressed into cognitive impairment, if you're actually noticing it, then you do want to commit.

And I've certainly seen that even talking to Doctor Bredesen, whenever he and I are troubleshooting about a patient or a resident, Marama, he's like, check their ketones.

You know, I think if somebody is getting the benefits that they want in the first few weeks or the first month of trying the diet on, then great. But if you're not getting those benefits, that's when working with someone like you, working with the doctor, working, and maybe measuring the ketones.

I'd love to hear if you how you feel about the breath meters and the strokes and all that, but it kind of getting that feedback so that you can fine tune.

I don't know if you've seen the same thing, but I've had patients where, you know, the wife can eat zucchini and stay in ketosis and the husband can't, he'll fall out of ketosis, a bikini.

So there's an individualization around this that I think some people don't realize. And there's a lot of questions that we get about, what can I eat this?

Can I eat that? What do I eat instead? And I always say, you know, I don't. I'm not trying to vilify any of your foods that foods are great. It's just can you get the the better question is, can you get into ketosis?

If you eat that? So can you share your experience? If you've seen a little bit of that individualization and and also how you check. Yeah. It's you said the magic thing and I, I'm from New York, so my attitude toward it is when people say, can I have blah blah, I, I don't know, can you, can you have it know.

Because it, it is it's so individual. Can you have it and still get the results you want. That's the question. The question is not even what can I eat and how much and still be in ketosis.

The ketosis is almost like a secondary. What the ketosis doesn't matter. What matters is how you feel and what matters is the clinical results. Is your cognition better or not?

If it's if it's better, who cares what the ketone level is, you know? No not that not that you should never measure. But like we are the goal is to have improved cognitive function.

The goal is not to have a ketone level of 3.6 or 2.0. The goal is to so, with with that in mind, when people are happy with how things are going, I don't see the point in measuring.

It's just an extra step. It can be pricey. Why bother if somebody's not getting where we want to go, then I do measure and, you just have to educate people in in the fact that, first of all, ketone levels fluctuate a lot throughout the day.

## Ketone Testing, Exogenous Ketones, and MCT Oil

If you're just checking at one point whether it's your blood or your breath or the urine, you're capturing that one snapshot in time. If you had tested an hour earlier or two hours later, it could be radically different.

So it's, useful to check a few times a day, and I don't really have any preference between the blood, the breath, or the urine. For me, more than anything, it's like, are you or are you not in ketosis or are you even there or not?

And then I think, I think the blood, I'm not as familiar with the breath. So I know a bit more about the blood. Looking at the specific number I think can be helpful if, let's say somebody is in ketosis, but, you know, 0.4, 0.2, it's like a very low level.

And maybe they're not getting the benefit because for their particular brain or their particular body, they need to be at like 2.5, or they need to be above a certain threshold to really get that effect.

And the thing is, that's like a 100% individual there. I don't think there's any hard and fast rules. It's and like you said, some, some, some people can eat 50 or 80g of carbohydrate a day and be in ketosis.

Some people have to be really real, like like 20g or fewer. So it's it's all individual. I wish there was some type of like if you eat this, you will be at this level of ketones.

Unfortunately, it does not work that way. We're all just a little bit different. Yeah. Why specifically do or maybe the exaggerated ketones? I want to get into that a little bit more because. So what?

Why would you specifically, recommend those. Which ones? Are there better ones? You mentioned MCT oil, and then I've seen the powders. So I'm curious if you don't mind kind of diving into the conversation around exogenous ketones.

There's some multi-level marketing brands. There's a bunch of different ones out there. And I feel like certainly myself personally, when I started looking at ketones, I was pretty overwhelmed.

And I went to an a nutritionist friend and she was like, I don't know. So I would love to just feel like the expert has answered the question on exactly this keto. And, I think the first thing to say is that this research is in its infancy.

There's so much we don't know about this yet. So, I know the multi-level marketing company you're talking about, and as much as I don't like the sales strategies that company, I think does fund some of this research so I can at least recognize them, like, okay, at least some of these profits are going toward this research. So, I typically don't recommend using these products unless somebody is really having a hard time adhering to the diet, which is pretty common, actually.

So, you know, or if somebody just wants to experiment, let me get my ketones a little higher and see what happens. So there are, we mentioned the MCT oil, whether it's the actual oil or they make powdered MCT oil.

Now that like coffee creamer and stuff, that is not actually ketones. That's a fat that is just digested differently than the way other fats are digested.

And your body more readily converts them into ketones. So again, even if you're not on a low carb or ketogenic diet, if you take MCT oil, you will have elevated ketones.

The other, the exogenous ketones, are actually ketones that you are just taking. And those also come in a powdered form that you usually mix into water and you drink it.

And then there's another kind that's called a ketone ester that the only one I'm aware of right now is also a liquid that you. But it's pre-made. You don't make you just drink it. And it's, not the tastiest substance on the planet.

It's it's not delicious, but it's it serves a purpose. It's like a medical purpose. And I do think that the ester is probably a little more impactful, just because I think it's more concentrated.

I could be wrong about that, though. And I guess I, I do recommend those for the people, like I said, that that are having a hard time doing the diet or just want to see do they notice a difference when, when they're ketones or a little higher from these products?

And the thing we don't know though, is your body under, you know, quote unquote, natural circumstances, only really produces ketones on a low carb diet or during fasting when the insulin is really low.

We don't really know. What are the long term effects of flooding the body with ketones from the outside, when internally, the metabolism may not be primed to process them properly?

Now, that's a concern for me for long term, but if somebody is in a very severe state of Alzheimer's or dementia, I'm much more concerned with the here and now and getting them ketones any way we can.

And let's worry about the potential long term effects sometime later. Because the really unfortunate truth is these people have one foot in the grave already.

Anyway, let's let's see how much of an effect we can have with the ketones. And I did you know what I'm saying? Absolutely. Yeah. And I hope that the science catches up with us.

I have had the same question in my mind is, if people are increasing their fats and potentially, you know, the saturated fats associated with coconut and, and eggs, which were vilified for a long time, I think I think that was a mistake.

I think eggs are actually really a perfect food. If you can tolerate them. Now, there are people who have allergies to them, but, you know, increasing your fat consumption, maybe even your your meat consumption.

Is there a risk if, you know, do you not get the benefit and maybe you're adding additional risk if you're still consuming carbohydrates. So if you're not fully getting the ketone benefit and you're continuing to consume carbs, you know, it's just adding fats.

Helpful. Do you have a sense that's a really good question. And I, I think the protein issue, the meat issue is kind of separate from the fat. But yeah, how do I say I'm so glad you asked because there's an abbreviation.

You might be familiar with it. The people watching might be familiar LC, CHF for low carb, high fat. Sometimes people use that sort of interchangeably with keto.

Except the thing is, depending on what you're trying to accomplish. I hate the LC hf abbreviation because it gives equal emphasis to the low carb and the high fat, when for many people the low carb is way more important than the high fat.

So when people say it's a high fat diet, well, it is, but it's really what it is, is a very low carb diet. And like like we said earlier, what makes ketosis happen is the absence of the carbs, not the presence of the fat.

So when you're eating your normal standard American higher carb diet and now you're going to put butter and coconut oil in your coffee and you're going to drizzle oil on everything.

And that's a recipe for metabolic disaster, frankly. And it doesn't mean it doesn't mean that everybody needs strict keto. But you can't do both. You can't have high carb, high fat.

You have to adjust something, you know, so the protein issue, the meat, I think is separate. I think it depends on what kind of meat. I think, frankly, there's a lot of people, especially older people, that should be eating more protein.

The typical protein recommendation is actually inadequate. We have so much sarcopenia, so much frailty. And I think part of that is because we've been made afraid of, of proteins, especially, especially animal proteins.

## Other Nutritional Factors and Statin Concerns

But, yeah, it's a it's a delicate balance, like you said, of, you know, can you just if you're not really burning fat, is it a good idea to just eat lots more fat?

Probably not that that's such a simple kind of. I love that you're kind of using your hands as the scale around fats and carbohydrates, and then the proteins are in there too, right?

Our trifecta of macros of macronutrients. And that if if you're going to toggle when you've got it's if you just go up and all of them that's just more caloric consumption and you're not going to get health benefits from that typically.

Unless, you know, unless it's a very special circumstance. Now, what are some of the other factors, other dietary and nutritional factors that play a role in, in Alzheimer's?

Is this kind of what we're speaking to? Is there more you can add? So thinking through the nutrients that someone needs for their brain to be functioning optimally?

Yeah, I think that, regardless of all this insulin glucose stuff, we've talked about a vitamin B12 deficiency all by itself can cause cognitive impairment all by itself, regardless of what else is going on in the body.

And I think that not only is B12 deficiency or just subclinical insufficiency wildly underdiagnosed, I think it's underdiagnosed because the quote unquote normal lab range is not appropriate.

You know, you'll be told your normal at 200. I forget what it is like picograms per mil. Whatever the unit is you'll be told your normal, but the range goes up to 900.

And so I know that the sort of B12 experts that I trust say that they like to see people at the midpoint or higher, especially if you are having signs and symptoms of an issue and you're below that point, you need to get it higher.

Sub, unrecognized and untreated hypothyroidism over the long term can mess with the brain. And then there's a whole, I'm not a medical doctor, so I can't change people's medication.

I can't adjust it all. I can do is give them education, the stat and drugs that lower cholesterol, the lipophilic ones, meaning the ones that cross the blood brain barrier.

This is, you know, any burger is not making this up. This is on the US FDA's website that known side effects of these drugs can be memory loss, confusion, and cognitive alterations.

And, you know, it's it's a conversation for someone to have with their doctor as to what is the relative importance of lowering my cholesterol versus not impacting my cognitive function.

So that's that's an individual discussion that has to be had. But I think it is essential that people be made aware that

that is a part. I know doctor medicine will get patients off statins if appropriate, if they're having cognitive problems.

Yeah. So just to add to that conversation, I think a lot of this is cardiologists are aware of this, but it hasn't trickled down into primary care. And a lot of statins are prescribed and managed at the primary care level.

And what what I tell patients is it's very clear the American Heart Association, American Diabetes Association, these groups have been very transparent that you should not be flagging or, well, you shouldn't put someone on statins who has a cholesterol, a total cholesterol level over 200 only if they have active heart disease or active diabetes, then should the goal be below 200 and so many patients.

Because the labs again, the labs get flagged at 200. And so an easy fix. Oh, I can write you a statin for that. And really it's not appropriate because and then what happens is they get on the stand and now their class their total cholesterol is below 250 below 240 below 230.

That sets you up for depression, anxiety, cognitive changes because those, all of our stress hormones, all of our sex hormones depend on on cholesterol as the backbone.

And so if we don't have enough of the building blocks to make the signaling that's necessary to tell our brain to make new neurons, that tells our body to make more muscle so that we can get the, you know, the growth hormones, all of that signaling that so necessary to maintain health and vitality as we age can be lacking.

So it's so important that we really understand the risks and benefits and that our doctors understand the risks and benefits and the different. Yeah, I'm again, I'm not a doctor, but I could write a whole book on statins.

They really they they may serve a purpose in a very specific patient population, but I think they're being wildly overprescribed, particularly in someone who is very elderly that does not have a cardiovascular problem.

What what are we trying to do here? Are we potentially preventing a cardiac event that they may or may not ever have? Meanwhile, they are already in the throes of dementia.

So I can't I can't change anybody's medicine. But I can just I think that paradigm is changing, but it's changing really slowly. But it's so nice to hear you recognizing that, you know, there's there's a trade off with any drug, with any therapy, there's always going to be risks and benefits.

It's so important, I think if you if a well-educated, patient goes in to their, their doctor and says, hey, look, is it really that low? And if you push back a little bit armed with this information, I think you'll end up in the right spot.

And so I just want to commend everyone for like for listening and for sticking with us for understanding this stuff, diving, diving deep into the research and really getting to the nuts and bolts because there there's not a one size fits all rate.

The standard of care is an appropriate for every single person, and there are complex issues to weigh and risks and benefits that are the take longer than the seven minutes that you might have with your doctor.

And so if you can go in with this information, then you will come out with much better advice. So, Amy, I, I'm curious what some of your favorite keto recipes are.

Oh, well, I am a very simple person. I love to cook, but I, I have so many fancy full color keto cookbooks that I rarely ever use. I like to look through them, but I, I very often will do a one pan meal.

So like a one of those glass baking dishes, some pork chops, some, you know, onions, zucchini, eggplant, asparagus, whatever you like. All of this salt and pepper, olive oil or whatever kind of seasoning you like.

Bake it. 350 for, you know, 30 minutes to an hour depending on what's in there. And it's delicious. I so often just do a ground, ground meat with a side vegetable.

It could be ground beef, it could be pork, it could be turkey. It's, canned, canned salmon. I just the world, you know, like we were saying earlier, this, this way of eating has become so popular that there's so many more things available.

You know, if you miss rice, you can buy the frozen rice, cauliflower, and you can make your own fried rice. I just tend to. I just keep things really simple for myself.

Once in a while I'll make something, you know, really out of the ordinary. But keto is really just some type of good quality protein, a healthy fat and some vegetables.

And, so like we were saying, it's not this radically, totally different way of cooking than you've ever done in your life, right? Yeah. No, I appreciate that.

It's funny, we we have very similar things. Last night we had a ground turkey with kind of an Asian inspired. There was some we do coconut aminos and there's a line trio and cashews and a little bit of, hoisin sauce.

And it's so delicious. It's so, so yummy. And we just did it with lettuce wraps and, we had some broccoli and like, that was dinner and it was great. I actually cut up an avocado.

That's one of my favorite snacks is just an avocado with some salt on it.

## Simple Keto Meals, Breakfast Ideas, and Caregiver Tips

I feel very lucky to be in Southern California where they're they're plentiful, all year round, essentially. What about breakfast? A lot of my patients will say, well, I but I just love the toast with my eggs.

Or, you know, I, I've been eating cereal or granola for decades. What do I do now? So hacks for breakfast. Yeah, I, I can't pass up the opportunity to say I mentioned earlier that I'm from New York.

I don't live there anymore. But I was born and raised in New York, and I haven't had a bagel in about 20 years, so it can be done. And toast addicts out there, you bagel addict, you cereal addict.

You can break a habit, I promise you. And I, I, I very often get the question, you know, I don't like eggs or. I'm sick of eggs. What can I have? And you would think that, like, if you're not eating the carbs, if you're not having toast and pastries and, you know, bread, the only other option in the world is bacon and eggs, like, where did this come from?

So I think people have to just wrap their mind around the fact that you can eat anything for breakfast. Just keep the carbs though. You can have leftover steak for breakfast, you can have a, you know, a slice of cold meatloaf for breakfast, you can have a salad for breakfast.

It's odd, only because it's unfamiliar to us. You know, in other parts of the world, you know, I, I, I studied Korean a while back in Korea. They'll have, like, rice and vegetables and kimchi and fish for breakfast.

So it's, we have to get out of the mode of thinking that there are breakfast foods that, like, you're only supposed to have at breakfast or you. It's weird to have chicken and, you know, eggplant for breakfast.

It's just different now for the people that really want those carbs. Again, depending on the individual level of carb tolerance, there are very low carb breads available now.

You know, they're high in fiber. They have, other kinds of added if they give you that spongy texture. So it depends on what what you're comfortable with eating too.

You know, if you want to keep it pure, you can make it at home with almond flour and stuff. And it's just time consuming. But, you can now buy various keto breads and, and, wraps and things like that.

But some people can have that and still get the ketones and get the way they want. For some people it's going to be too much carbohydrate. Yeah, I think that's a good thing to to make note of here is that I have patients who come in and see.

But I but it says keto on the package. It must be fine. And I have to remind, you know, not everybody's the same. So that might keep some people in ketosis.

But just because you're going to list as it's keto on it doesn't mean that you will saying ketosis. Exactly. Yes. It's the way I'm inspired and I'm kind of getting hungry here talking about food.

Any other tips for our Alzheimer's patients or even the caregivers who, who are working so hard to care for someone with dementia? Any other quick nutritional tips that you want to share before we sign off here?

Yeah, I would say, you know, depending on what the family dynamic is like and what the home situation is like, and this is something I wrote in my book, The Alzheimer's Antidote.

It's really helpful if the whole family can get on board with eating this way, either the whole family or there should be at least one other person in the household besides the person with the Alzheimer's.

That is like a diet and body. Because if you if you're not the only one and you don't feel like the odd one out, I just think it makes it easier and especially then no care.

Caregiving is the hardest job in the whole situation. You should not have to become a short order cook. You should not be cooking five different meals for everyone in the household.

And the thing that. So the beautiful thing about a lower carb way of eating is that it's safe for all ages. It's safe for everybody. Just not everybody will need strict keto.

So maybe if you're making that meal, you're making the roast chicken. Maybe you keep the potatoes for the younger people or the people that can still have the carbs, but you have the non-starchy vegetable option for the other people.

So you're still you're not really making a whole separate meal. I just think, and frankly, the truth is, so many millions of people right now do have type two diabetes or prediabetes or metabolic syndrome, or they're just overweight.

Most people can benefit from some amount of carbohydrate restriction, even if it's not crazy strict keto. So everyone in the household should be able to participate in some way in eating the same.

Other than that, that's an I guess one. One more thing too. I this is one of those areas where I think those exogenous ketones and the MCT oil can help because if the affected person, if their cognition is a little bit better from that, that makes the caregiver's quality of life a little better too.

It can ease some of the strain, I think. Yeah. I love hearing you say that. I can't count how many times I've had, a family go into ketosis, or we've suggested a ketogenic diet.

And so somebody who's not my patient ends up on a ketogenic diet and they say, you know, my mood is better. My my bathroom habits are better. My, you know, all of that. My headaches went away.

I get up earlier in the morning or I sleep better at night. All of these benefits, you know, I think are kind of left on the table where in the standard American kind of lifestyle, when we're always eating carbs for fuel.

And so just experimenting with it, no matter who you are, but especially if there's somebody, with Alzheimer's in your orbit, it can kind of open your eyes to the potential benefits.

And the number one piece of feedback I get about being on a ketogenic diet is that my brain fog clears, I think,

more clearly. And we know why now. Because the ketones are such good fuel for the brain.

So it does. Like pun intended, it is a no brainer for people who are suffering with Alzheimer's, dementia or cognitive decline of any type, including like that foggy, fuzzy, foggy feeling.

It can be. It just in three days, it can be gone. I'm. I'm so it's so funny that you're saying this. They actually just did a clinical trial recently.

It it came out maybe a few months ago where it was a ketogenic diet for Alzheimer's, which is nice because most of the research in this area in ketones for the brain are using the exogenous ketones or MCT formulas.

But this one was the diet. And what they found was that the they had each each affected person was paired with a loved one or a caregiver that was going to do the diet to, the majority of the caregivers said that they were going to continue with the diet because they felt so good, like, yeah.

I love it. I'm glad that the the literature is finally reflecting what we've been seeing clinically. Amy, I want to make sure that I, I just love what you're up to.

Your book was so informative, and I want every one of our attendees to know how they can find out more about you, where they can buy the book, and if they want to become a client or, of yours, if they want to learn more directly from you, how they can find out more.

Yeah. Thank you. So, my, my website needs some work, but it's, 2@nutrition.com t u I t nutrition.com, but my book is available, you know, on Amazon or, you know, support your local independent bookstores if you can.

It's called the Alzheimer's Antidote. If you want to learn more about keto in general and like the things we were talking about, you know, with the brain fog or migraines or, you know, PCOS, acne, all kinds of things, that low carb is good for that.

In my newest book and Your Carb Confusion, that was co-written with, Doctor Eric Westman from Duke University, who's spearheaded some of the, you know, most important research on keto for obesity and diabetes and all that.

And, I'm very active on Twitter. So my handle is to at nutrition. That's my main social media outlet. And, I do have a YouTube channel by the same name to it.

Nutrition. Fantastic. Thank you so much, Amy, for what you're doing, for spreading the word about how great keto can be for people, how much healthier we can live, the better lives they can live, by adjusting our nutrition.

So thank you. I hope people find this helpful very. I.