EPISODE 235

[INTRODUCTION]

[00:00:10] AVH: Hey everybody, welcome, my name is Ashleigh VanHouten, I'm the host of Paleo Magazine Radio. Now, today's podcast is coming a little bit late, we were hoping to get this out on World Alzheimer's Day which is September 21st. We missed that but I do think that this is a topic that is of course relevant and timely and important all the time, not just on the one day that we appoint as the day to pay attention to this thing.

Today, we're talking about Dementia, Alzheimer's and the studies that are being done to find a cure for it. Alzheimer's or Dementia is one of the biggest medical conditions that we're dealing with right now, it's the sixth leading cause of death in the United States, according to the Alzheimer's association, an estimated 5.7 million Americans of all ages are living with Alzheimer's disease in 2018.

The search for a cure for Alzheimer's has been going on for decades and we have yet to find one but there is a growing body of scientific evidence that suggest that an enrichment of certain nutritional compounds in the brain may reduce the risk of Alzheimer's disease as well as of course preventative strategies which we talk about all the time on the podcast.

There was a new small 18 months study that came out of Ireland that may have identified this unique combination of nutrients that can slow the progression of Alzheimer's disease and individuals who already have it. The study they're currently working on reproducing it and doing it on the larger scale because they found statistically significant findings but they're examining the effects of these nutritional compounds that are also found in foods such as salmon, spinach and peppers, the trial was conducted by experts at the nutrition research center Ireland in collaboration with the University Hospital Waterford and the results were published in a journal of Alzheimer's Disease in June 2018.

Now, spoiler alert, the answer or the findings that come out of the study aren't saying that if we all just a little bit more salmon and spinach, we're going to be okay, unfortunately, we all wish that that was the answer but I think the findings that came out of the study are exciting and

hopeful and I think that it bears repeating over and over again in every situation that preventative measures and healthy lifestyle behaviors like exercise for your mind and body and a whole foods diet and you know, a lot of other things that we talk about on this podcast.

It's never too early to start it, it's never too late to start it and we can't under estimate the importance of doing that. Those are all the things we're going to talk about today, we're speaking with Professor Ríona Mulcahy who was one of the professors that was involved in the study and she was appointed Consultant Physician in General and Geriatric Medicine at University Hospital Waterford in 2000 and Undergraduate Dean, Royal College of Surgeons, Ireland in 2011.

Her areas of specialist interest include Dementia, Stroke, Parkinson's disease and Poly pharmacy in the elderly. She has also extensive ongoing research including collaboration with professor John Nolan who is another professor involved in this particular study in Waterford institute of technology, looking at the role of nutrition and dementia and age related macular degeneration which is eye issues.

Again, this is a very important and relevant conversation to anyone who cares about their health and being both proactive and preventative and also I guess reactive when we have to be to certain issues because we can't always adjust for genetics and the past but we can always move forward with more information.

This is my chat with professor Ríona and I hope you enjoy it.

[INTERVIEW]

[0:03:54.0] AVH: Riona, thank you so much for being here, welcome to the podcast.

[0:03:57.7] RM: Thank you.

[0:03:58.5] AVH: We were hoping to have you on in time for World Alzheimer's Day which I believe was September 21st and we have obviously missed that mark but I think it's better late than never and I think that this information is obviously timely and useful anytime. I appreciate

you coming on and talking about this really important subject and I'd love it if you could kind of just start by giving our listeners a brief background on who you are and what you do.

[0:04:24.0] RM: Okay, my name is Ríona Mulcahy and I work in University Hospital Waterford which is my clinical center and then I work with professor John Nolan in the Vision Research Center in The World Nutrition Center which is based in Waterford. I suppose from a clinical point of view, every day of the week, I see people with Alzheimer's disease and I often say to people, I qualified as a doctor in 1990 and at that point, really.

Having people, you know, regularly in my clinic in their age 90's wouldn't have been that common whereas with really advances in medical technology, people are living longer and longer and while that is fantastic, it does mean that we have an increase in age related diseases.

Age is a major risk factor for Alzheimer's disease and that's why we're seeing the prevalence or the number of cases of Alzheimer's disease going up so much. There is right now in the States, maybe 5.7 million people with Alzheimer's disease and that number is expected to double every 20 years. It's a huge healthcare challenge that's facing us.

[0:05:33.8] AVH: Would you say that you're seeing more cases of Alzheimer's because people are living longer and because of certain lifestyle factors, is it a combination of both or do you think that it's predominantly just because we're all able to live a lot longer now?

[0:05:50.0] RM: Completely, it's a combination of both so as I say, age is major risk factor and 45 to 50% aged over 85 have Alzheimer's disease, we are back to maybe 10% of people are so aged over 65. With each five years, the prevalence goes up by about 6%. It's really very common as you get older. Would you couple that then with lifestyle factors and accumulated risk factors. We know for example, smoking excess alcohol intake, obesity, these are all significantly increased your risk of Alzheimer's disease.

As does other conditions such as heart disease, hypertension, high cholesterol, diabetes and really, in sort of the developed westernized world that these combination of risk factors is very

common. You know, we talk about obesity up to 40 to 50% of people in the states are either overweight or obese.

That is a big change. Then our eating habits have changed, you know, we live in a society where fast food or processed food is very common meal time and as well as that, then we have I suppose mass farming or mass production of food stuff. That means the nutritional value per se of food is going down over time.

We have multiple risk factors that are accumulating but age is certainly very important.

[0:07:23.4] AVH: We're here today mostly to talk about a recent study in clinical trial, I think it took place in Ireland, that highlight some exciting findings about nutritional strategies that may slow the progression of Alzheimer's that may improve sight and memory and mood. A pretty, I guess exciting study that you're a part of, can you tell us about that?

[0:07:44.6] RM: Absolutely. We've known for some time that nutritional habits can reduce your risk of developing Alzheimer's disease. In our particular study, we gave people with an established diagnosis of Alzheimer's disease, these were people who already had the disease in the mild to moderate form. We gave them nutritional supplementation that contained carotenoids and I'll explain those in a minute, vitamin E and omega three fish oils and really, interestingly, care is reported that their relatives or their loved ones had improvements in the number of areas.

They had improvements in their ability to do everyday tasks, their functional ability, they had some improvements in memory and also, in sight and mood. We were really to be honest, these were quite unexpected findings because we weren't all together convinced that giving nutritional supplementation in established disease would have benefit.

Our initial results are very exciting and they've led us on to launch a much bigger trying out, The Remind Trial where we are repeating the study but in much bigger numbers both in Ireland and recruiting international centers to seek and we replicate the results because there are certainly very exciting.

[0:09:01.8] AVH: Yeah, that was my next question is whether this initial study, the findings were as you guys would say, like a significant finding and I know that was clinical trials, it usually has to be able to be reproduced and with a certain size kind of group before people will start to say, "Okay, this is really a significant finding that we can get behind."

That's something that you're now working on reproducing you're saying?

[0:09:27.3] RM: Absolutely, good science will always go on and reproduce its results where it all possible. Our initial study is quite small in numbers, we've already started the remind trial here in Waterford where we're recruiting people with established disease and we've interest from other centers, both nationally and internationally.

I think the big thing is that we've had no good news really for Alzheimer's disease for a long time. I think the last drug for Alzheimer's disease would have been Mementine that was approximately 15 years ago. The drugs that are used for Alzheimer's disease are quite limited in their efficacy. There's been millions and indeed billions put in to various therapeutic approaches to treating Alzheimer's which we are looking at nutrition.

This nutritional supplement is really important to say, there are no side effects, there are no downsides to this supplement. It's safe, our initial work will show that it is effective. We know for example that giving carotenoids will improve vision and contrast sensitivity in people with macular degeneration which is a condition of the eye where you reduction in your contrast sensitivity and central vision and we now feel from our initial studies that these are good, also, for memory.

We should point out really that this isn't an isolated study, this work is on the background of about 15 years of work both nationally and internationally where we find that these carotenoids, these are the pigments that you find in richly colored foods like broccoli, peppers, kale, et cetera.

Carotenoids are found in high concentration in parts of the brain that are important for memory. We know that the brain selectively takes up this carotenoids and we know by combining these carotenoids with fish oils, we improve their absorption and their delivery to the brain.

There's a good rationale behind why this particular formulation would be effective, we know that carotenoids are antioxidants and unfortunately, our brain well, fortunately or otherwise, it's a very active organ, it's working all of the time but it is also prone to degeneration where the cells simply stop working as well as they should.

We're hoping that by giving these cells a nutritional combination that we will make them work better and longer and ultimately live longer and live better.

[0:11:56.3] AVH: Okay, before we talk a little bit more about the nutrients and the combination of these nutrients that's been effective. I want to ask a couple of more questions about the study because you said, when you were explaining it that there were certain findings or certain outcomes that you were relatively surprised to see what were your initial hopes in the findings that you were hoping to have with the study when you started it?

[0:12:19.1] RM: Okay, to answer that question, I must really go back to some of our earlier scientific papers that have been published in The Journal of Alzheimer's disease. In our center, we identify that patients with age related macular generation, this is a condition that affects the eye, we found that patients with this condition had a much higher association with Alzheimer's disease. This was the first time internationally that his was shown.

We then did serum levels, we checked the blood level of carotenoids in these patients with Alzheimer's disease at age related macular generation. Found that there was significantly lower in this group. Initially, we gave them just carotenoids on their own to see, can we increase their blood levels of carotenoids, can we improve their vision and can we improve their memory?

Our initial study, we certainly improved absorption of carotenoids and we improve their vision but disappointingly, we didn't improve memory. At around the same time, there was a paper by map stone that was published in nature and maps stone found a blood test where he felt that you could identify Alzheimer's by doing a peripheral blood test. We reproduced that blood test or that study and found that one of the things that people with Alzheimer's disease are very deficient in are omega three fish oils or fatty acids.

The brain is a very fatty organ. Really, as a matter of interest and curiosity, we combined fish oils with the carotenoids and vitamin E and to our delight as well as surprise, we found that that particular group of patients that were on this unique combination had improvements not only in their blood levels of carotenoids but also, in their vision and in their functional ability.

When I say we're surprised, I mean that very genuinely, it was, we were trying this from a curiosity point of view to see, would it make a difference and the results are very promising but we are very aware that we now need to go on and reproduce these results in higher numbers.

[0:14:32.6] AVH: Got it, okay. You did say also, you can maybe clarify this in case I'm wrong but some of the results that you were finding, they were people, self-reporting or reporting that they noticed that the people that they were caring for were able to see better, were able to maybe recall better, we're just kind of feeling better in general.

Is that the case, is that sort of how the information was collected?

[0:14:57.2] RM: Yes, I suppose, to answer the question really, maybe just to say a little bit about what Alzheimer's is. Alzheimer's is a progressive difficulty with initially short term memory, remembering recent events. It's also a progressive difficulty with every day activities so that might be simple things like washing, cooking, food preparation, groceries, et cetera.

It's also a change in behavior and move that maybe depression or agitation or other things. When we see people with Alzheimer's disease in a clinical setting, we always take their own story because that's key but we also get what's called a collateral. From a care or family member, asking about well, are they managing in these various activities of daily living et cetera.

In this particular study, the striking thing was that their carriers reported, this was unprompted report because they wouldn't have known what particular formulation they were on. The carers and the group of people who were on the combination and omega three fatty acids and carotenoids reported that actually they were in better form. They were managing their personal care better. They were managing their everyday things better and that's to do with really I mentioned about living better and that is really what we're excited about that Alzheimer's

disease is a very robbing illness where it can rob you of your ability to manage things that you just did second nature.

But this was a report from relatives where actually they're better, they've improved, their mood is better, they are managing everyday better and that's what made us excited with the results.

[0:16:38.9] AVH: Got it, so you mentioned it is this combination of carotenoid, fish oil vitamin E and you also touched on this I guess it is a new supplement that combines all of this things in the right proportion. So when you were doing the study, were you providing the people with this supplement or were you providing them with the actual food based nutrients and combining them? How did that work?

[0:17:05.8] RM: That's a very good question and that would be great if we could get all of these nutrients simply by diet alone but unfortunately given the level of nutrients that we delivered via supplement, you wouldn't be able to reproduce it by diet alone. We would talk about having to eat a Mini Cooper sized car full of vegetables daily and that's the level of supplements that we are talking about. So we advise all our patients and will continue to do so in the importance of good diet.

Good exercise, looking after your lifestyle habits, for this particular study you wouldn't be able to get the level required which is why we use the supplement. So we use the supplement containing three essential carotenoids: lutein, mizexanthin and zeaxanthin and then we combine then with vitamin E and omega three fish oils and this supplement is now being produced in commercial form for say just on the basis of this study but what we actually did was we looked at levels of carotenoids that would deliver what we needed it to deliver to get your improvements and absorption sight and brain delivery.

[0:18:22.1] AVH: Okay, I mean it's a little bit – it makes me a little bit sad to hear that news just because you like to think and we all like to think that if we are eating a really nutrient dense and healthy and unprocessed diet that we're getting everything we need but I think a lot of people don't know that in studies or even studies like you read articles that are like turmeric is the new miracle spice and people think, "Okay well if I put a dash of turmeric in my dinner a couple times a week I am sorted out".

When really if you actually dig down to that study, you have to be like as you said eating, ingesting a bathtub's worth of turmeric every week to get the benefits. So while obviously having these results and finding an answer or potential answer is great news. It does make me a little bit sad but I guess my next question would be, this was a study as you said with folks who already had mild to moderate Alzheimer's.

Now if we are looking at being preventative and proactive the average person out there doesn't necessarily have to be eating a Mini Cooper's worth of vegetables right? We can be proactive by paying attention to these nutrients and taking them in a whole foods diet and that is going to be still helpful right?

[0:19:40.0] RM: Well it is really interesting maybe and to look at parts of the world that have a very fish based diet or beans and flavonoids based diet such as islands off the coast of Japan or parts of the world where there's a Mediterranean based diet which would be a diet high in vegetables, olive oil, fish, they certainly have a reported lower prevalence of Alzheimer's disease. So there is no doubt that good nutritional and good lifestyle factors can reduce the risk of Alzheimer's disease.

And that's key that is the message we need to get across. You need to watch your diet and we talk about when do you need to do that. You need to do it when you're in the womb. So your mother needs to watch her diet and certainly for example, when mothers are breastfeeding their babies there are actually carotenoids in the breast milk. So even as early as that the body is selecting out certain nutrients that are good for development.

And it would be great if we could deliver the nutritional good that we need by diet alone. It is in today's world where people with population growth and population expansion where we have mass production of food stuffs, it is hard to take in that actually the nutritional value of some broccoli is very much reduced organically grown broccoli, you will get a much higher nutritional value from that. So we have to be careful about what we are eating and we have to be very aware of where our food stuff comes from and then try and maximize its benefits.

You know we talk about eating salads which are fantastic but dry salad has nowhere near the benefit of adding an oily dressing. So again, these are all things that maybe we're just not aware of and it is very hard to persuade a teenager that eating chips and pizza every day is ultimately not going to be good for your health because when you are 18 you presume you'll live forever. So really it is a whole lifestyle approach to come back to again supplementation.

We've looked at various studies which is TILDA which is a huge longitudinal study on aging that's going on in Ireland and showed and in the Crest study one of our own papers from the Vision Research Center in Ireland, we showed that giving carotenoids can enhance memory even in healthy control. So there is certainly something to it but there is no doubt and you know I tried and persuade my own children about eating lots of vegetables with variable success.

But there is no doubt that paying attention to your diet and exercise and lifestyle in early life will pay dividends in later life. No doubt about that.

[0:22:29.9] AVH: Right, well I mean one thing I took out of that that makes me happy is that adding a nice delicious healthy oily dressing to your salad is a good thing. It makes it healthier. That is great news for me because that tastes better too.

[0:22:41.6] RM: Yes it is good news.

[0:22:42.5] AVH: So it's great, yeah. So I have heard in the past thrown around that Alzheimer's can also be called type three diabetes right? Because it is so related to your lifestyle factors and how you eat but one thing that I take from that as a positive is that you really do have a certain level of control over how you live your life and how that can affect your overall health.

So for those of us who are not quite at the age yet where this is becoming a stronger concern and are in general good health and are just trying to find ways to be proactive like I said and take care of your health in general, how protective is a good lifestyle with good sleep, healthy food, exercise, mental and physical exercise, all of these things that folks tell us is good for us, how protective is that for the average person in avoiding Alzheimer's?

[0:23:37.6] RM: Well depending on the studies that you read, they talk about modifying your risk factors as having the ability to reduce your risk of developing Alzheimer's disease by up to 50%. So a huge difference. There are things we can't change. We can't change our genetics for example which we can certainly change or modify the risk factors then they include things like avoiding being overweight, heart disease, high blood pressure, diabetes are also very much linked to diet and being overweight.

Certainly there is a big genetic component which genetics does not make this completely inevitable. You know you can certainly add to your risk by all of these risk factors. So we modify the risk factors are the things we can work on. We can work on diet. If I had the ability to produce the benefit of exercise by a tablet, I would be all happy and mortgage my house on it and yet it is very hard to persuade people and get out there and get walking and walk or exercise for 30 minutes a day.

To the point where you are short of breath but you can still speak sentences. So you don't have to join a fancy gym and do fancy stuff. It is nice if you can but you know it is just the importance of exercise and good diet and then just remember it is important in studies like this to talk about how your nutritional habits can alter as you get older and can particularly alter when you develop Alzheimer's disease. So you know your ability to do the grocery shopping, to do food preparation.

To deliver nutrients that maybe are very important becomes hugely impaired and we talk about a finger food type diet that becomes very common. I mean that may be things like toast to boiled egg. There are simple things that are easy to prepare but not necessarily giving you the nutrients that you require and why it would be great if we could do all of this without supplementation. In some situations you simply can't get in enough to deliver the results that you want to deliver.

[0:25:37.4] AVH: Okay, you mentioned this supplement that is now being developed as a result of this study. Is that something that is available now that people can buy and is it something that would be prescribed for individuals with Alzheimer's or would be able, average people who are just trying to be healthy would be able to benefit from?

[0:25:58.9] RM: Well I know that the supplement is being produced and the way to get it or to find out more about it is to go to its website which is memoryhealth.com and then to hear more about the science behind the supplement, you can go to Professor John Nolan who is my colleague and his website is profjohnnolan.com. So there is information on Memory Health itself at memoryhealth.com and then all the science and a lot more science and besides Professor John Nolan's website.

[0:26:31.9] AVH: Okay perfect. That was the next question that I was going to ask you. What is the connection between the supplement that is being produced and the individuals who conducted the study, what is the connection there?

[0:26:44.2] RM: Okay, so this is a Scientific Research Center's Division Research Center of Ireland and I am a physician in the University Hospital of Waterford. So our input into this is the scientific background. So we have produced extensive research papers that have been published in the very high impact journals like the journal about Alzheimer's disease. When this formulation was found to be effective, the memory health was then produced or is being produced commercially but there is no direct link.

The science is what has fed the commercial and development of the supplement because there will obviously be interest in it and people wanting to get it. MacuShield and MacuHealth which was the carotenoids for visual health has been there for a long time and is a great success in treatment of age relation macular degenerations. So these supplements are already there, MacuHealth and MacuShield in the UK whereas the addition of Omega three fish oils is what's made it different and that's what memory health has. It has the exact formulation that we used in the study.

[0:27:53.1] AVH: Well Riona, thank you so much for taking the time to walk us through this and I think ultimately for the lay person who is listening to this podcast including myself, I think the main things that we can take from this is that there is research being done. There is good work being done and there are exciting and hopeful and positive results that are being found and so that's a good positive thing that is coming from it.

And then also secondarily that we can't underestimate the power of healthy lifestyle factors that people think just because it is not sexy and like you said, it is not a magic pill that will give us abs. Those things are still crucially important and it is never too late to start. It is never too early to start and that we can all be making choices immediately to improve our health and improve our future health as well. So I think that all of that is positive stuff and I appreciate you for coming on and talking to us about it. Is there anything else that you want to share with our listeners before I let you go today?

[0:28:51.8] RM: Not at all, really just to echo what you're saying there and that is we need to take nutrition and exercise seriously and it is never too early. That is the bottom line, it's never too early to start. It is also never too late to start. So you know for people out there that are saying, "Well look, I am whatever age and I am sure it is too late" we know it's not. Altering your diet and exercise and your lifestyle habits have a benefit at whatever age.

Really we need to be taking nutrition seriously right from the very start but we also need good news for this very prevalent, very relentless disease and at the moment, we have no cure. We have nothing that stops it in its tracks. So if we can do something to make the life of people with Alzheimer's disease better which would be great and then for all their cares and family members who look on feeling very helpless if we can do something to improve things and that's great.

[0:29:47.5] AVH: All right well thank you again for taking the time. We'll put those websites that you mentioned in the show notes so folks can do some more research and learn on their own and we'll be following along with the research you're doing and thank you so much for the good work that you are doing for us.

[0:30:02.3] RM: Not at all, delighted to talk to you.

[0:30:03.7] AVH: All right, take care.

[0:30:04.5] RM: Bye-bye.

[END OF INTERVIEW]

[0:30:09.5] AVH: Folks that all for today. Thank you as always for listening. If you have any questions or want to add to the conversation in any way, please feel free to reach out across all social media channels at Paleo Magazine. You can talk to me personally @themusclemaven on Instagram, let me know what you think. If you like the podcast and you enjoy it, please leave us a nice rating and review on iTunes so that more people can see the podcast and hopefully learn from it and pass it along and share it as well.

So next week, I have another one of my special Best of Paleo Magazine Radio editions. This one is all about gut health because goodness knows that is a very complicated subject that we could all talk about forever. So I manage to pull together some of the most interesting pieces I think from a number of interviews that I have done on gut health experts, maybe some things that you haven't heard a million times because I think if you are listener to the podcast but you are interested in health and digestive health, you've probably heard a couple of this sort of high level things over and over again.

But some of this stuff was kind of interesting, kind of weird, talking about some gross stuff. So I mean stay tuned for that if nothing else but yeah, that's it for next week and I hope you have a great day. Thanks everybody.

[OUTRO]

[0:31:21.8] AV: Paleo Magazine Radio is brought to you by the Paleo Media Group and is produced by We Edit Podcasts. Our show music features the song *Light It Up*, by Morgan Heritage and Jo Mersa Marley, and on behalf of everyone at Paleo Magazine, thank you for listening.

[END]

