Zoom In on **Dementia & Alzheimer's**

Beyond Medication: Non-Pharmacologic Treatments for Dementia
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Transcript of Zoom with Dylan Wint, MD

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Please note: This transcript has been edited for clarity and brevity.

NANCY KEACH: Good morning, good evening, good afternoon. Welcome to BrightFocus Foundation's Zoom In on Dementia and Alzheimer's program. I am Nancy Keach, Senior Vice President at BrightFocus Foundation. BrightFocus Foundation is a nonprofit that has invested more than $300 million globally in research grants, catalyzing thousands of scientific breakthroughs, life enhancing treatments, and diagnostic tools for Alzheimer's disease, macular degeneration, and glaucoma.

Today's program, as you can see, is "Beyond Medication: Non-Pharmacologic Treatments for Dementia." And I can't believe the extent of the interest in this topic, so we'll probably do several programs on this. I want to call out that the program is supported by sponsorship funding from Lilly, Biogen, and Genentech. And we're very grateful to these sponsors for making these kinds of awareness and information programs possible.

We have a fantastic expert today, and certainly a compelling subject. Over 2,000 people registered. That's our highest yet. So I want to first say, please be aware that the program will be recorded and live streamed. We're going to have people watching on YouTube.

So today we received over 230 pre-submitted questions, So, obviously, we're not going to be able to answer every single question today, for which I apologize. But a lot of the questions that were not on this particular topic are already answered in the previous programs that we've done. And you can see them here, a lot of questions about Leqembi and Kisunla, a lot of questions about diagnosis and so on. So I just want to make everyone aware that every program is for free and is online at brightfocus.org/ZoomIn. And they're also on our YouTube channel. So if we are not answering your question or if you just were diagnosed or it's the first time you're having a particular question, check online, see if it may be covered in one of these episodes, and hopefully you can find the information you're looking for there.

So let's take down the slides. And I'm going to jump in and introduce our excellent guest. Dr. Wint is Medical Director, Camille and Larry Ruvo Chair for Brain Health, Director of Education, and Las Vegas Legacy Chair for Neuroscience Education at Cleveland Clinic, Nevada. So he is a wonderful clinician and a wonderful person, I might say, having just getting to know him. Dr. Wint studied at the National Institutes of Health, the University of Florida, University of Miami and Stanford University. He is board certified in neurology, psychiatry and behavioral neurology and neuropsychiatry. So you can tell he's a lightweight. He specializes in behavioral changes, associated with neurologic conditions, and he is honored to share what he has learned from his teachers, mentors, students and patients. Welcome, Dr. Wint. We're absolutely delighted to have you today.

DYLAN WINT: Thank you. Thank you so much for that very kind introduction.

NANCY KEACH: It's my pleasure. All right, let me catch up in my notes here. So we had a little prep call, and we talked about some of the different non-drug therapies that you use in practice. I'm just going to start by saying, are non-drug interventions, or uses applications, at what stage of disease are they most useful?

DYLAN WINT: Well, we can apply nonpharmacologic or non-drug interventions, really, at any stage of cognitive decline or dementia. So they can be used all the way from prevention, to people with severe dementia.

Now, the particular type and amount of each intervention varies depending on the stage of dementia or of cognitive decline. So there are some interventions that work very well early on, but wouldn't really do much later on. And similarly for interventions that work later on, they may not be applicable to people who are in very early stages or for prevention.

NANCY KEACH: So let's go in progression order maybe. What types of interventions are preventative so if you're concerned, if your parents have had it, if it's in your family, you're hitting 50 and you want to prevent?

DYLAN WINT: Yeah. So, we call them here the six pillars of brain health. These are ways of maintaining your brain's resilience and resistance against the effects of aging and against what we call neuropathology, abnormal proteins or vascular changes in the brain that can make the brain less efficient, less functional. So I divide those into, one, activity, the three types of activity, physical activity up until your 70s or so. Usually we're talking about aerobic exercise, a minimum of an average of 150 minutes per week of moderate level aerobic exercise. Moderate means that at the end of the exercise or during the exercise, you would be too out of breath to sing a song, but you could still hold a conversation with a friend. OK, so that's moderate level. We're not talking about running yourself ragged here. So physical activity, cognitive activity. That means trying to learn new things, staying cognitively engaged, being curious, doing things that your brain is actively involved with, as opposed to a passive activity like watching television or a movie. That's not to say you never do those things, but that should not be the majority of what you do.

And then social activity. We're seeing an increase in evidence-base supporting the importance of social activity, engagement specifically with other people, and not just on a superficial level but with some purpose. And then the other three components of what we call the six pillars of brain health, getting proper rest and relaxation. This includes, importantly, restorative sleep. Sleep will only be restorative if you get the right amount, the right quality of sleep, and if that sleep occurs at the right time.

So there's the sleep part, but also relaxation. That means having leisure

time, time when you just enjoy your environment, enjoy yourself, enjoy the people around you. Paying attention to medical issues, particularly diabetes and high blood pressure. Those are shown to be risk factors for developing cognitive decline of all sorts, but particularly Alzheimer's disease, which is the most common form of cognitive decline.

And then, finally, diet. So we recommend that the MIND diet, which was developed at Rush University. That's a combination of the Mediterranean and the dash diets that has been specifically studied for its impact on reducing the likelihood of cognitive decline, as well as reducing actual cognitive decline in people who have concerns about their cognition.

NANCY KEACH: And there's a lot of discussion about what to eat when we talk about diet. What are things to try to avoid? What are adjutants?

DYLAN WINT: Yeah, I think there is more and more evidence that highly processed foods are probably not great for us. There's been evidence from looking at processed meats, looking at also evidence that microplastic presence in the brain– and microplastics tend to show up in foods that are highly processed– may be associated with dementia. So people with dementia at death have higher levels of microplastics in their brain. The closer something is to the way it comes to us from nature, the more likely it is to be beneficial to our health. And when we think about processing, we have to think about processing not just artificial processing, but even natural processing.

So, for example, a cow eats grain and then we eat the meat of the cow. Well, that grain has been processed through the cow. And so it does appear that a diet that's much higher in fruits, vegetables is more beneficial for the brain than one that has high levels of meat. Even if it's free-range or whatever, vegetables and fruit are likely to be better for us than meats are.

NANCY KEACH: So meats in moderation.

DYLAN WINT: In moderation, exactly.

NANCY KEACH: And I have to ask– there were a couple of questions

about this which talk about sugar– how bad is it to eat a ton of sugar, and why?

DYLAN WINT: Yeah, it's pretty bad. So sugar in the form in which we get it is highly processed. I mean, we go from– in our country sugar is mostly delivered to us through high fructose corn, syrup or through white sugar, white granulated sugar. This is all highly processed food. Sugar inherently is not bad for us. We need sugar to survive, but our bodies are really made to process sugar that comes directly from fruit or directly from the carbohydrates that are produced by breaking down whole grains. So sugar is not great for us. Increased sugar intake increases the risk of diabetes and increases the risk of other vascular problems. A lot of us in the field suspect that negative vascular effects also contribute to the likelihood of cognitive decline, in general, just straight age-related cognitive decline, but also to the likelihood, certainly of developing vascular dementia and to the likelihood of developing Alzheimer's disease and perhaps other dementias as well.

NANCY KEACH: And vascular dementia we're talking about inflammation in the blood vessels in the brain, as opposed to other pathologies that we see in different types of dementia.

DYLAN WINT: You have a very advanced way of thinking about this because most neurologists, when they think of vascular dementia, are thinking about actual strokes. That there's damage to the brain because there have been strokes. But you're absolutely right that there's increasing evidence that vascular impacts on the brain are not just about the occlusion of a blood vessel and the death of the tissue that that blood vessel supplies. But also about the state of the blood vessels, the state of their level of inflammation, as you mentioned, but the state of their general health, the walls of the blood vessels, these are in very close contact with our neurons. And our neurons, which are the messenger cells in the brain, are not doing this work by themselves. The glia that traditionally has been thought of as just support cells for the neurons, are also contributing to cognition. And glia interact very closely and make up part of the vascular system of the brain, so you're absolutely right.

NANCY KEACH: Are there substitutes that are better to sweeten or are

they all– and I'm not talking about artificial sweeteners, but things like agave, is there anything that is better for us, let's say?

DYLAN WINT: That is a terrific question. And I have to be honest and say that I don't know the answer to that. I mean, following the principle that the closer it is to nature, the more likely it is to be something our body handles well and does not harm our body, I would say probably but I don't think we know this for sure because even some of those substitutes have what we call a high glycemic index, the tendency to quickly raise your blood glucose levels. And things with high glycemic index don't seem to be that great for the brain. Large fluctuations in glucose levels in the blood can impair cognition in the moment, as well as have a long term adverse effect.

NANCY KEACH: Right. And, yeah, I often hear the phrase what's good for your heart is good for your brain, and I think that's the catch all. And I'm kind of spending a long time on this because diet is one of the things that we're doing one way or all the time, we don't stop eating, but I'm going to add in hearing loss and vision loss, we've also learned our risk factors.

And just say, because we also fund eye research, that it's really helpful and important to get your eyes checked and your hearing checked regularly. And you want to talk about a little bit the evidence on how hearing loss, if vision loss can affect, or why.

DYLAN WINT: Absolutely. There's been this relationship that's been recognized between– I think hearing loss has more evidence and a longer body of evidence behind it, but relationship between hearing loss and cognitive decline, as well as vision loss and cognitive decline. And over time, that association has yielded evidence that there's actually a causative relationship between hearing loss and cognitive decline. But, furthermore– and here's the good news– correcting hearing loss seems to be protective against the cognitive decline that can occur from hearing loss. And so following along those same lines of thought, we suspect the same is true for vision loss.

NANCY KEACH: Thank you. Yeah, I'm going to agree with Kathy in the chat. She says, honey. I like honey better myself.

DYLAN WINT: Like I said, I suspect that it's probably better for the brain. I don't know the data that support that but I haven't investigated it either.

NANCY KEACH: I have a pre-submitted question from Linda in Littleton, Colorado. Can you please discuss the benefits of omega 3 fatty acid for the brain? And I know these are not specific areas of specialty to you, but can you comment on that, and also other supplements. There's always tons of questions about supplements.

DYLAN WINT: Yeah. So the question about the benefit of omega 3s versus the benefit of omega 3 supplements is a slightly different question because we get omega 3s through natural foods that have healthy oils and healthy fats in them. Fatty fish have omega 3s that are beneficial for us. Fatty fruit like avocado has omega 3s that are beneficial. Olives and olive oil also. There is a pretty good association between ingestion of diets that are high in omega 3 fatty acids and cognitive preservation, and actually general health. This is thought to be one of the reasons that the Mediterranean diet and the MIND diet are beneficial for us, is that they're high in these omega 3 fatty acids.

Now, there has not been a consistent evidence base indicating that omega 3 supplementation does much to prevent or to slow cognitive decline. Now, my daughter, for example, is allergic to fish. She can't eat fish so that takes away a big source of omega 3s from her diet. We give her cod liver oil tablets, which she hates, but at least she's able to ingest those. And so supplements may have their most important role for people who need supplementation because they can't get it in their diet. But I would go back to this idea that the closer it is to nature, the more likely it is that it's going to be helpful to us. And I think that probably eating salmon is going to be more helpful to us than eating an omega 3 capsule.

I suspect that in natural foods, as we've seen over the years, that there are still things that are present in those natural foods, or the combination of elements present in those natural foods does something that's more than just the sum of the parts. So, yes, fish has omega 3 fatty acids in it, that's not the only thing that fish has in it. Fruits and vegetables have these phytochemicals, they have vitamin C, vitamin A, calcium, et cetera, but they probably have other things that are healthy for us. A really quick and

easy one, fiber. The fiber that you get from fruit, you're not going to get in a vitamin C tablet unless that's an additional supplement to it.

NANCY KEACH: Pamela is asking in the chat if you know what about algae-based for omega 3. And, actually, Pamela, I've been doing that for years because the head of one of the organizations said, take algal DHA. But I don't know, Dr. Wint, if you know any of the effects, positive or negative, on that.

DYLAN WINT: Yeah. I've heard that there's a benefit to omega 3 source from algae. I think that the underlying thought there is related to the fact that fish that are high in omega 3s really seem to confer both a longevity benefit and a cognitive benefit and so the thought is, well, the fish probably get their omega 3 from algae and other things in the ocean so maybe if we do that directly. I would still say, though, that getting your omega 3s from the sources that are bodies as humans on the Earth for thousands of years have been getting our omega 3s from probably is more suited to brain health and general health than new ways that have been developed to get the omega 3s. That is my hypothesis, not necessarily something that I've seen proven.

NANCY KEACH: Mark is asking a question, and I'm going to soon go off diet because there's so much else to cover but this is such a big topic. Mark is asking– and I know there were some pre-submitted questions– I've heard that intermittent fasting can affect cognitive decline in that they allow the sugar levels in our blood to, quote, "reset," and that this is especially important at night. Is there any truth to this?

DYLAN WINT: There are mixed results on intermittent fasting and cognition. I think a lot of it probably depends on your beginning state. In other words, if you are someone who is ingesting a high sugar diet, then intermittent fasting allows your glucose levels and, therefore, your insulin and glucagon levels to return to normal, reducing the likelihood of insulin resistance, which may be a component of cognitive decline in some people. Intermittent fasting may also match our more traditional ways of taking in food where, for example, we'd be out working in the field or hunting, or something like that for most of the day, taking in very small amounts of calories, and we would have major meals after breaks of many hours, as opposed to just three or four hours.

NANCY KEACH: We have actually Jolene and Mason hand raised. Hi, Leslie. What's your question?

LESLIE: Well, now that we're nearing the discussion of food, are you, Dr. Wint and others, concerned that now food prices have risen appreciably and the food assistance programs for those who are low income or who are otherwise qualified, they are being restricted or eliminated completely from this food assistance? I myself am concerned because of both factors. Would you like to comment on the current situation for people who want to eat healthier but are limited?

DYLAN WINT: Yes. You bring up what I think is a profound and important issue, which is that much of what we're able to do to promote healthy brains does depend or at least is influenced greatly by how our government and our larger society behave and the way that we think about health, the way that we think about what financial viability or feasibility means and what we value.

So, first, your comment about food prices. I'm particularly distressed that food prices seem to be rising faster for the very things I mentioned, things that are coming to us from nature, whereas things that are more manufactured, food items that are more manufactured seem to have at least somewhat more stable prices. But the higher prices of food in general mean that people have to look for the less expensive foods, which tend to be the highly processed foods. They have to look for more calorie dense foods, so that means foods that have higher levels of sugar, higher levels of fats which are usually not good fats for us. And it means that there are some people out there who are going without the nutrition that their brain needs.

So this is a significant problem. And, of course, the same applies to assistance programs that deliver food. They create the same choices if you remove those programs. People have to make what we call them bad choices from the brain standpoint, but it's the only option for them if they're going to get enough calories to survive. So I thank you for asking that question. And I don't think it's a political question. I think it's a health question, what is the best way for our country to pursue the ideal health for the most people in our country? And it's really to help people to be

able to afford healthy foods.

LESLIE: Thank you very much, Dr. Wint.

DYLAN WINT: You're welcome.

NANCY KEACH: I'm so glad you asked that, Leslie, because I was going to try to wrap this up by saying not only food, but for whether we're talking about education or going to the gym or getting enough sleep or not having stress– all of which are important factors– not everyone has the capability of doing these things. They're what we call food deserts and education deserts, et cetera. So what I wanted to ask you was– if we call these the social determinants of health. So if you are limited in what you are able to access in terms of especially healthy food and you have to work three jobs, let's say, so stress and sleep, what would you say are the three most important things that anyone can do if you can't get the freshest food? And I'm thinking exercise must be one of those things.

And I just want to give a quick shout out. There's a fellow named John Lewis in Atlanta who does chair exercise videos that are online. And we'll send out a link to his work when we send you all the recorded version of this because even if you have no gym equipment at home, he'll do exercises raising trash bags or using water bottles, and so anybody can do these but please let me let you answer.

DYLAN WINT: Yeah, that's a fantastic question because not everybody– you're right– has access to the time or the financial resources or, like you mentioned, even if you have the financial resources, the location where you can go to get healthy foods. So one is to try and do the best you can. In other words, go as high as you can in the hierarchy of what's beneficial. I think that number two, try and there are these, quote unquote, "six pillars" that we have here, but I think there's six principles that you'll see in just about any brain health center. I suspect that supplementing, or so, exercise a minimum of 150 minutes per week, let's say that you can't get exactly the highest quality food, maybe charge up your exercise program to 180 minutes a week. Or if you don't have the time to do that, if you increase the intensity of exercise, that actually seems to reduce the amount of time that you need.

And one of the things that it sounds like the Mr. Lewis you mentioned would promote is getting the exercise in the activities that you're naturally performing. So make those things harder, park farther away, walk up the stairs instead of using the elevator. Even if you're pushing someone in a wheelchair, pick up the pace a little bit. Have them carry something in the wheelchair that adds some weight to it. So we're human beings, and we're endlessly creative. I get so many ideas from my patients and their loved ones about ways to improve quality of life. So don't be shy about being creative and not following the, quote unquote, "prescription."

And when we talk about nonpharmacologic interventions, individualization is really crucial. And I think that's also important when we're talking about prevention mechanisms as well. But the top three things that I would say, yes, exercise seems to have the most consistent body of data supporting both prevention overall, but also it's used at any stage of cognitive impairment for a variety of symptoms. Social activity, just because the rate of discovery and, again, the consistency of findings since people really started looking into that, I suspect we're going to find that it is a really, really huge component. And this is something that is available to almost everyone. Obviously, there's some people who've been very isolated circumstances, but for most of us, there is someone or some people with whom we can engage.

And then trying to not be passive in general, engage your mind, engage your body. If you're sitting doing nothing or you're sitting watching television and you don't really know why you're sitting watching television, do something else. It's all right to sit down and watch the news for an hour each evening because you have made that conscious decision, but to just passively sit and let TV wash over you is really a no-no.

NANCY KEACH: I love what you're talking about because I was at a conference where they were talking about Dan Buettner and the blue zones. Probably a lot of you have heard of the blue zones. There's been a TV show about places where people tend to live very long and why. And someone's hypothesis was that it's not so much a specific food or diet in those communities but that exercise, it's the way of life. So in our culture it's like, OK, we have to stop and go to an exercise machine instead of it

being an inherent part of our life. So I love what you're saying. I've been thinking about this a lot that if you can make the way you live on a daily basis healthier, just like you said, by pushing the wheelchair, by bringing in the garbage, and making yourself more active as a part of your life, it's better than saying, well, I to go to the gym four times a week.

I'm going to move from this although there's a million great questions and suggestions, including from a friend of mine who works at C2N the blood diagnostics company, who texted me and said selecting canned beans or cooking beans is a good option on a limited budget. Just rinse them to get rid of extra salt in canned beans. But I'm going to move on because you told me about specific therapies that you guys do at your university, at your clinic. Occupational therapy, I think, was the first thing that you mentioned. Can you talk about how you apply occupational therapy?

DYLAN WINT: Yeah. And I would put occupational therapy in the broader context of cognitive and functional rehabilitation. And so for us, ultimately what we're after is not a diagnosis, it's not a particular treatment or medication. Ultimately, what we're after is an end goal of optimizing the way that the person feels and the way that they function. And so non-pharmacologic therapies, there hasn't been much proof that they reduce the protein accumulation in the brain or the atrophy, although there is some evidence that they do these things. But what we are really talking about is trying to make people's lives better.

And so occupational therapy and cognitive rehabilitation, they focus on the core feature of dementia– if you can call it a feature– which is cognitive decline, and sequela which is functional decline. So in occupational therapist, one of the ways I like to tell my patients about what occupational therapy does is they look at how you occupy yourself during the day. And they try to make sure that the things that you need to do, the things that you want to do, and the things that you ought to do are happening in a relatively smooth and trouble-free manner. And so they look at what are the gaps between smooth operation of all of these things and where you are now, and they try and close that gap in whatever ways they can. And that can include working with you on your memory. That can include coming up with devices or techniques to make your environment easier to navigate, given your current cognitive status. They can include training a caregiver or a loved one in how to make the

environment more manageable or in ways to increase the likelihood that the things you need to, want to and should get done are getting done. Cognitive rehabilitation, specifically, is focusing on improving cognitive function, memory, language function, attention and concentration, visuospatial function, and so forth in the interest, again, of looking towards improving and preserving function. So they are– I think that they go well together. The cognitive rehabilitation looking more at the basic brain functions and improving those with the occupational therapy, looking more at the functional outcomes, how you occupy yourself.

NANCY KEACH: Can you explain what cognitive rehabilitation therapy is?

DYLAN WINT: Yeah. So cognitive rehabilitation primarily uses exercises aimed at strengthening different aspects of the way the brain handles knowledge. So cognition is just how do we handle information. And so cognitive therapy will find where your strengths and your deficits are in terms of cognition, and ideally uses the strengths to help to enhance or improve the deficits, get you closer to normal function in those areas that are deficient. And even better, some cognitive rehabilitation programs help you to do that within the context of lifestyle management. So, for example– and I'm not a cognitive rehabilitation specialist, but we partner with a group called Moneta. One of the things that they do is a memory exercise for the patient might be remembering what their physical exercise routine is from day to day. So they're combining that physical exercise with an actual memory exercise, or performing their physical exercises while doing some kind of memory component so that you get this layered kind of approach to nonpharmacologic treatment.

NANCY KEACH: Yeah, I am definitely going to get to music and environment, and I'm definitely going to get to the light and sound stimulation so thank you for those questions in the chat. I just wanted to ask Amanda, can you put– Dr. Wint just mentioned a company called Moneta which we happen to know. And because I think that that's a virtual program where you can do– you can access cognitive rehabilitation services from home so I'm just going to put the link in. I'm sure there's many other companies that just happens to be one we know of because, for full transparency, Paul is on our board but it's a wonderful company.

So if you want to check that out, you can. So I won't hold Partha off anymore. She's been writing, can listening to and enjoying classical music be considered as good cognitive exercise? And I want to even go beyond that because I've seen miraculous things being done with music therapy. If anyone's watched the Gabby Giffords documentary after she was shot, really couldn't speak at all and there's a wonderful shots of her having music therapy. At first she could only say the word chicken, and then she would be able to say more words. So both I'd love to talk about specific arts therapies and then also environment. Can your environment affect you significantly?

DYLAN WINT: So, absolutely, the environment can have an impact. And we see this in our day to day lives, those of us who have intact cognition and aren't particularly worried about our memory, although the number of people who aren't worried about their memory is getting smaller and smaller. But you walk into a messy and cluttered environment, you kind of feel something that's different from walking into a neat environment. You walk into a room that's dark at 3:00 PM, that gives you a different feeling than walking into a room that's bright at that same period. So an environment that is adapted to the needs of the individual is really important. And I'm not sure if you're talking about more specific environmental therapies.

NANCY KEACH: I think, light and let's go to music and the arts because I think that's something that really has a lot of evidence at this point.

DYLAN WINT: Yeah. I know the most about music therapy because there are registered music therapists who have prescribed programs for using music to improve cognitive and other neurologic deficits. So music therapy is not just listening to music– and we can talk about listening to music in a minute– But music therapy uses music as a tool, just like I use medications as a tool or an occupational therapist uses cognitive exercise or devices as a tool, to improve that person's day to day function. And we see that music therapy can have benefits for cognition, it can help to reduce agitation and aggression in individuals with dementia. It can help to improve movement. It can help to improve gait. Our music therapist has even used music therapy to help to improve balance. So music

therapy is definitely an effective treatment. It's not as widely available as some of the other rehabilitation therapies, but, certainly, if it's something that you've wondered about, go ahead and pursue it. Music in general can be very helpful because it helps to set a mood. The same way walking into a room gives you a feeling, hearing certain types of music can do the same.

There's a lot of anecdotal evidence, and some experimental evidence that just the presence of music can help, again, to calm agitation and to increase the likelihood that someone will participate in their activities of daily living. So those folks who are resisting bathing or toileting or dressing, which we see commonly, sometimes music can help to improve that.

NANCY KEACH: Thank you because you went to where I was going to go because there were a lot of questions. When your loved one– this is for more advanced generally– is very agitated or resists you're trying to help them, there are a few drugs that have been approved for agitation and dementia, but what are– and I also want you to talk a little bit about your training, the caregiver programs, because it never really occurred to me before how important it is that if you can get some training as the person taking care of a loved one with agitation, it's going to help you both tremendously.

DYLAN WINT: Yeah. So for agitation, as I mentioned, both individualized music therapy and just the presence of music can be helpful. Activity programs can also be helpful. So this can be either an activity schedule throughout the day that helps to increase the consistency, therefore, the person with agitation or aggression is less likely to be agitated or aggressive because they kind have a sense of what's coming, training of the caregiver in ways to approach this. Well, it's 3 o'clock. It's bath time. I don't want to take a bath. It's OK to wait till 4 o'clock. A lot of times in older folks in particular, it's OK to wait until the next day and how to give oneself more grace as a caregiver. I think a lot of our caregivers are very, very tough on themselves, wishing they could have done more, regretting something that they did or didn't do in the past.

Our caregiver programs, I think, help folks to focus on, A, the present and,

B, not on this is not dementia and the consequence of dementia are not the fault of anyone. It's something that happens, and there is no one to blame. And then also sometimes caregivers can get this sense of failure because they try something and it doesn't work. That's a success because it's told you what doesn't work, right? So you can move on to the next thing.

Aromatherapy is another non-pharmacologic treatment that has been demonstrated to be helpful, particularly lavender or lemon balm. And this can be applied topically, like on the skin, or in the air or in the bathwater. Any of those methods of delivery do seem to work. Exercise can sometimes help, and has been demonstrated in a few studies to actually help reduce the likelihood that someone will exhibit agitation or aggression.

NANCY KEACH: I'm looking in the chat and Lauren just posted her organization, which specializes in music and art therapy on Long Island. And so I just wanted to say that if you look up, for example, music therapist near me because everyone can't come, unfortunately, to Las Vegas to see Dr. Wint, a lot of the things that they're doing there or caregiver training, if you're taking care of someone, there are free online classes. And maybe we'll dig deeper into some of those on future episodes because I think this is really critical. I think everybody has seen that thing on Facebook of the old ballerina who seems to be almost non-functional in the chair. And someone starts playing the music from Swan Laken and she becomes sort of reanimated. So there's so many things with music.

And I also I'm a believer in pets. And I know that brings other issues with it, but I've actually seen people with advanced dementia who are carrying stuffed animals where it brings them a lot of comfort. So I think continuing to search for those types of things online is wonderful.

And I'm going to jump now to the light and gamma wave stimulation. And I know this is not your specific area of expertise but– oh, and before I go, there is a company called SingFit that I believe can provide music therapy remotely. I hope that's correct, but there are a lot of other companies as well. And I think Amanda can put SingFit in here, the link.

So we have a subprogram on clinical trials. And we featured a trial called the HOPE trial which has just finished recruiting so you can't volunteer for that one anymore. But it's a company called Cognito. They're testing some sort of a gamma wave therapy. Can you talk a little bit– because there's– and I think we're going to have to do a program just on this because there's gamma wave and there's other types of sound and there's light, and then there's focused ultrasound which opens the blood brain barrier, which we talked about a couple months ago with Dr. Ali Rezai. But what people always write is 40 hertz therapy, can you talk about that? So what can you tell us about those?

DYLAN WINT: So, yeah, there's a lot of exciting evidence from animal studies as well as from human studies that gamma wave therapy or gamma frequency therapy may be beneficial in folks who are trying to preserve cognition. So the studies that have been done so far, to my knowledge, are fairly small, except for the HOPE study which you just mentioned, that I think the results are expected sometime late in 2026 or in early 2027. And so, really, right now what we have is reasonably consistent, I would say, evidence that this 40 hertz treatment has some kinds of benefits not just in preserving cognition, but maybe even in preserving brain size. And now we really need larger studies to understand better, number one, are these findings consistent in a large and diverse group of people? Because we talk about Alzheimer's disease and we talk about dementia, but it's dementias and even "Alzheimer's disease," quote unquote, I think we're going to find that there are real differences between people who are all– they have in common that they have amyloid and tau in their brains but there's a whole lot of other stuff. This is being recognized in the diagnostic schemas which now are including vascular as part of it, the amount of vascular disease. So there's a lot of variety here. And one treatment is not likely to fit everyone. And then the other thing that we'll find out from these studies is how long the benefits last, which is very important because we see, for example, with the medications that have been out for many years that we see a benefit early on with treatment that seems to fade as time goes by.

NANCY KEACH: That's so interesting. We will absolutely keep everyone updated on these, if another trial of another headset or device opens up

because these are things, generally, that you can do from home, to some extent, they are not ingesting a drug. And so it's a hopeful area of study. And I agree. And even with Dr. Rezai and the focused ultrasound that it's been tested on very small groups, so we will need more volunteers for the research over time and so I'm going to put in my shameless plug for it. If you are able and can participate in clinical research, please do.

DYLAN WINT: I will put in a plug for that also. And mine is even– I don't care about being shameless but just I'm not very much of a clinical researcher or anything like that so there's no benefit to me from encouraging people to participate in clinical trials. As a clinician, what I want is new and better treatments for my patients. I know for a fact that single treatments aren't going to help. We need a layered approach and an individualized approach in patients. The biggest impediment to finding new treatments is getting clinical trials done and moving on. And the biggest impediment to getting them done is recruiting enough participants, so please participate in clinical trials if you're eligible.

NANCY KEACH: Yeah. And I think ultimately the field, it altogether believes that the best way to be treating dementias and related neurodegenerative diseases is with the combination of whatever medications are available, lifestyle interventions, the kinds of therapies like cognitive rehabilitation therapy. And while we're on that, so it'll be a combination of all these things to keep us as well for as long as possible, several people have written about brain games and neuroplasticity. So set us straight, are digital games, are crossword puzzles, are they really helpful or are they not helpful? Because it's just so commonly asked.

DYLAN WINT: Yeah, sure. I would say the best way to summarize it is that specific games are better than doing nothing because at least your brain is engaged. It appears that doing a particular game gets you much better at that particular game, or even set of games, but it is very unclear, if not disproven, that this leads to a generalized improvement in cognitive function.

So what you want to do is get your brain engaged in across a wide variety of activities that are cognitively stimulating because that gives you the best chance of addressing different aspects of brain function. I love

crosswords, for example. I absolutely hate Sudoku. I can't make heads or tails of it, but I've started trying to do Sudoku because it's a different mental process from crosswords. Anything that your brain barely has to put any effort into to perform is probably not doing a whole ton for your cognitive preservation. The more that you kind of struggle with and push through something, probably the better that is for your brain.

So broad variety and try to do things that are cognitively stimulating, but also what we would call kind of ecologically valid, meaning that there's not a lot in real life where your crossword puzzle skills are that applicable. But conversational skills, that helps across a broad variety of areas. Not just your verbal skills, but your ability to attend to emotion and facial expression. So that's personality skills, that's interpersonal skills, that's visuospatial skills. So engaging your brain in things that are real life challenges is probably better for you than individual games.

NANCY KEACH: And Lauren in the chat– I love it– learn to dance, play an instrument, learn a new language, learn chess. So it's really that thing of learning something new, something that challenges one a little bit. I wanted to mention another company, and these are just ones I happen to know about, a company called Eldera which pairs older people virtually with young children for an ongoing series of conversations. And I love this because it's social engagement for older people who might not be able to leave their homes or whatever, and it also greatly benefits the children from around the world. And from what I understand about this program, they often form long, long term bonds and so it's just one of those that I love. And, again, if you Google, there's many, many types of programs like that but that's the one that I happen to know of.

DYLAN WINT: I have to mention because you mentioned that, a local high school student named Mia-Alani Matsubara here in Las Vegas. She has developed a foundation and a program called Forget Me Never Foundation, I think it is. High school students go to nursing homes and assisted living facilities, and engage the residents in various games and activities. So, again, ecologically valid way of stimulating cognitive performance and it's also good for the kids who are doing it. But you get that intergenerational aspect, conversational and interpersonal aspect, as

well as the cognitive stimulation and pressure of doing a game.

NANCY KEACH: We only have three minutes left so let me first ask, does anybody have a burning question that they have to get answered right now that will be relevant to everybody? And you can think about it for a minute because I'm going to– and I'd say, put up your hand or put it in the chat. But a professional wrote something in but I think it's really applicable for everybody who has loved ones who are progressing with dementia. So this is from Chitra in Marina, California. I'm a medical speech language pathologist. I'm dealing with a lot of psychotropic polypharmacy usage within nursing homes. So they're giving them tons of this medication in the nursing homes for managing behavioral issues for people with dementia and Alzheimer's. I would like to know how I can advocate for my patients better with the medical directors to avoid these, especially short term use with abrupt stoppage, thereby causing permanent baseline shift. And I'm bringing this up only because if your loved one is in the nursing home and is getting this, she's asking how as a professional she can talk to the medical directors, but you as clients, as families can do this as well. So do you have any suggestions there?

DYLAN WINT: Yeah. I think maybe one way to start is to ask, what else are you doing besides applying these medications? And I think that naturally will get those folks to think about whether they have actually tried something before medications.

Another is to be aware of the risks of the medications. So the medicine that's approved for the treatment of agitation and aggression and Alzheimer's disease, Brexpiprazole, it's associated with a higher risk of stroke, a higher risk of sudden death in individuals who are older and who have dementia. And so is the risk or the burden of that medicine worth the expected benefit? And, yeah, I think the idea of abrupt changes in medication is really one of the most disruptive to people who are suffering or who are experiencing cognitive decline. Their brains are already changing, and then we're throwing in this external factor and moving it back and forth. You never really get a stable understanding of what's really going on with that brain.

And then also ask about, what do you think is the cause of this behavior?

So someone's agitated, agitation I don't think just drops from the sky. We may be more likely to become agitated by an external influence or stimulus if we have dementia, but there is some driver to the agitation. Agitation is not out of the blue. So to the extent that we can understand root causes for some of the symptoms that people are having, some of the behaviors that they're exhibiting, we will stand a much better chance of addressing and fixing those behaviors.

NANCY KEACH: I can't believe it's 11 o'clock already because I have so many questions. I could easily go for another hour or so. As I've been doing lately, I'm going to make you promise in front of all these people that you'll come back again at some point.

DYLAN WINT: OK.

NANCY KEACH: And somebody wrote– I'm looking for it– that I said this is being recorded, yes. This whole episode which my dear Alexa Villarreal, who's handling all the YouTube feed, she will edit this program and it will be emailed to you in about a week, along with other resources. And so I'm going to ask Mason, can you put up the final slides as we conclude here? So if you would like these free publications about Alzheimer's disease, you can see we have several pamphlets on Alzheimer's disease. They are free. And if you would like copies, you can call the number here. It's 855-345-6237, or you can email reply@brightfocus.org. All these episodes will be available for hopefully throughout my lifetime at brightfocus.org/zoomin, zoom in, all one word. Can you go to the next slide, please, Mason.

If you think this program would be helpful to people that you know, I'm going to ask you to share this link with three friends. They can go on the landing page, look at all these research resources, and register for other programs so, please, share this with at least three friends. They can go to brightfocus.org/zoomin and register to participate in the program. And, again, if there's topics– I have so many topics that we have to cover or cover more deeply, but if you have a topic you want to recommend, you can also email us at this address. And I see a whole slew of questions have come in again about medications, about especially Leqembi and Kisunla. And I think now we started this series two years ago with information on these new drugs, I think it's a great time for us to revisit that. So you will

see this fall, I think, another series of meetings on those medications, along with the other traditional ones, but all the FDA approved medications that are being used as an update for you. Thank you for these kind remarks in the chat. It's absolutely delightful.

Do we have another slide, Mason? Oh yes. On Thursday, August 7, for our Clinical Trial series, we have actually a fabulous researcher coming on, Dr. Robbie Brinton, Roberta Brinton, who's talking about the ReGen Alzheimer's Brain Clinical Trial, which is recruiting. And it's about regenerating– whether or not brain tissue can be regenerated. And then on August, 21, we'll have Dr. Beau Ances on to talk about the gut microbiome and Alzheimer's.

And if you can just take down the slides, Mason. I just want to say what I've started just to say at the end of each episode, which is hug the people close to you that you love, spend time with them while you can still communicate with them. And those lifestyle modifications that Dr. Wint talked about, sleep, try not to stress so much is something I work on all the time because I'm very passionate about what I do, as are most of the researchers in this field. Be kind to yourself. Be kind to those you love, and please keep coming back. This is a work of passion for most of the people in the field. We love to see your faces and to get to know you. So thank you for coming. Thank you, Dr. Wint, so much for participating. You are a wonderful communicator, and, as we know, not all researchers and scientists are. So thank you, everybody. And thank you, again, for these kind comments. It really means a lot to us. And hopefully we'll see you in August.

Resources:

- Take Care of Your Brain: https://www.brightfocus.org/alzheimers/prevention/prioritizing-your-brain-health/
- Six Pillars of Brain Health: https://health.clevelandclinic.org/brain-health
  - Get moving
  - Seek out mental challenges
  - Eat smartly
  - Be social
  - Get enough sleep
  - Take control of your health
- MIND diet: https://health.clevelandclinic.org/mind-diet-boost-memory
- Chair Exercises with John Lewis: https://www.youtube.com/watch?v=gw2pbv0j7jk
- Moneta Health – Cognitive Rehabilitation Therapy: https://www.moneta.health/
- SingFit Music Therapy: https://www.singfit.com/
- Eldera: https://www.eldera.ai/