Welcome to the Cutting Edge Health Podcast with Jane Rogers, where we discuss science to help prevent cognitive decline.

[music]

[00:00:00] Jane Rogers: Welcome to the *Cutting Edge Health: Preventing Cognitive Decline* podcast. I'm Jane Rogers. Before we get to our guest, we've listened when you asked for personal help in implementing the ideas from our podcast experts. You may have been trying to make changes, but it can be overwhelming to embrace this cutting-edge material. To help you out, I'd like to invite you to join us for two cool new things. Monthly zooms with a longevity-focused MD or me.

Think of this as a time to ask your questions and get answers to speed your progress. Also, do you want the inside skinny on sourcing key molecules dosing to consider and learning what's working for me personally? To further guide you, my team and I have put together an extensive online video course called Cutting Edge Health Accelerator. We want to accelerate the implementation of these paradigm-shifting scientific breakthroughs in your life.

Both these come together in one package to make it easy to slow aging, to be sharper, to live longer, look better, and have more energy. To learn more on how to take advantage of this, go to mycuttingedgehealth.com. Again, that's mycuttingedgehealth.com. Use the coupon code, "Jane 10," at checkout to get 10% off. Our way of saying thank you for being a listener. Now, onto the podcast.

How do you go about reversing memory loss in its early stages? Dr. Kat Toups is a functional medicine psychiatrist in the Bay Area. She's now running the second clinical trial of the Bredesen Protocol to help restore cognitive function. From her background, she's convinced there is not a one-pill solution for Alzheimer's disease. I would like to welcome to this podcast, just a wonderful researcher. Her name is Dr. Kat Toups. You may have heard me talk about her before because, Kat, I've just been such a fan of yours for what you have done with helping people with mild cognitive impairment. Deep bow to you. Thank you.

[00:02:06] Dr. Kat Toups: Oh, well, my pleasure. It's my passion. I love to help people. It's great that we're finally getting these tools to really move the needle on something like dementia.

[00:02:16] Jane: For someone who doesn't recognize your name right away in this field, can you tell people just briefly what you did with the Dr. Dale Bredesen protocol and the study that you completed, and then where you are headed now with, now, a larger cohort?

[00:02:32] Dr. Toups: Okay. Well, let me back up just a tiny bit. I'm a psychiatrist by training and a geriatric psychiatrist. I've also been a researcher throughout my 30-some-odd years of my career. Who's counting at this point?

[laughter]

[00:02:48] Dr. Toups: I used to run a clinical trials research center and I have been the principal investigator on over 100 clinical trials. I did quite a few trials with Alzheimer's and definitely several in MCI. In the older days, MCI was a newer construct than it is now. All of those trials failed. I did over 20 trials for Alzheimer's. I did trials with all the drugs, the older drugs now that are out there with the Aricept and Namenda and things like that.

When I say "failed," they might've had some improvement or the delay. Really, it's not that people improve, but it delays the decline. They're not really getting better. Even back then, when I was still doing clinical trials, pharmaceutical trials, we did have anti-amyloid drugs. It could wipe out all the amyloid plaques in the brain. The pervasive thinking in the pharmaceutical industry, "Well, if the amyloid is causing the problems, let's wipe it out and people will be better."

That seemed like a reasonable thought, but it doesn't turn out to be true. Even some years ago, we had drugs that we could show on the PET scans that amyloid plaques were reducing, but people did not get better clinically. That's all that matters, right? We need to be better clinically. While I'm doing Alzheimer trials, I suddenly started becoming very cognitively impaired myself.

I was 50 years old, and I had become allergic to everything. I had what I later learned was multiple chemical sensitivity. My immune system was going crazy, and my brain didn't work. I would test my patients for the cognitive testing using three words that I had used for more than 20 years. I could no longer remember those words and I would have to write it down.

[00:04:33] Jane: Oh, my gosh.

[00:04:34] Dr. Toups: They got worse and worse. I had to stop working. I had to move my trials to another research center. I couldn't use a computer anymore. I couldn't back up or parallel park my car. I couldn't decode what was being said. I thought I needed hearing aids. I really had an auditory processing problem that I had developed. My brain was degenerating very rapidly. I had the good fortune to learn about functional medicine.

I immediately saw the utility of this whole-- Dr. Bredesen likes to call it "precision medicine," but it's similar. The idea is root cause resolution. What are the causes that are contributing to factors like our brains degenerating? With a sieve for a brain, because I wasn't retaining anything and I wasn't comprehending in the same way I used to, I went through all the modules in functional medicine. I applied each facet to myself. I gradually got better and I got my brain to come back online.

[00:05:31] Jane: Oh, fabulous.

[00:05:33] Dr. Toups: I started practicing functional medicine, helping other people with both psychiatric and cognitive disorders. Then I had the good fortune to meet Dr. Bredesen early on. Now, we've been working together for quite a few years on the research. Sorry, that's a little long segue into the research that we've done. We had a clinical trial with 25 patients at three locations. I worked with Dr. Ann Hathaway and Dr. Deb Gordon. We were all collaborators on this research study with Dr. Bredesen.

The exciting news from our study is it was a nine-month trial. Everybody had an active functional medicine, precision medicine treatment, which is different for every person. People say, "Well, what did you do?" Well, that's kind of a long story when you look at, individually, what we did because we need to figure out what are the factors for each person. We can definitely talk more about all those factors.

The upshot of the study is that 84% of our patients had improvement. When you think of comparing to, now, we have these newer anti-amyloid drugs that are coming out on the market, nobody gets better in those studies. The latest one that has the best statistics but just came out, it slows the decline by four to seven months, which is not much, right? In the scheme of things, if you think of when somebody is diagnosed with Alzheimer's, for many people, it's about a 10-year process from diagnosis to death as the brain degenerates.

Okay, so you're at the top of that range, seven months of slowing, but you don't get better. I don't see much utility in that. First, there is huge risks with those medications. I think it's up to 24% of people have brain bleeds from the medication. As it's clearing, the amyloid plex and the way the mechanism works somehow, it's disruptive to the blood vessels in the brain and people have bleeds.

In several of the trials, I think the last two different drugs, three people died in each of the trials from the brain bleeds. There's a high risk with those drugs for very little payoff. It's very exciting for the work that we do. Look, let me just first off say, can everybody get better? We're not ready to say that. I'm not ready to say that. We look at the numbers and we look at the statistics. We had 84% of people that had some or a lot of improvement. Some of my patients went from mild Alzheimer's to completely normal.

[00:08:02] Jane: Wow, and so this is lasting. This isn't something that just lasts for a couple of months. You're fixing them. As long as they continue to pay attention to their trigger points, their issues, and we'll talk about some of the issues that you see most commonly, but as long as they pay attention to those, you're saying this is a lasting brain fix.

[00:08:20] Dr. Toups: You made a really important point. As long as they continue to work on the program of what's helped them to get better. I see this happen sometimes with cancer. People change things. They get treatment with the cancer. They say, "I'm cured of my cancer. Now, I can go back to eating my high-sugar diet and not getting enough sleep," and their cancer comes back. No surprise, right? It's the terrain. It's the environment.

If you go back to what you did before that caused the problem, it's going to come back. We've definitely had people more than 10 years out. I'm more than 10 years out. Let's see. It was 14 years ago that I had to stop working for three years. What I find, and I believe, Jane, in hearing some of your story, I think you found this as well with your own work on yourself. My brain gets better and better because I'm constantly doing things to improve it.

When I look at where my brain was five years ago and, actually, I can tell you more about NeuroQuant MRI scans and we can actually see things like the gray matter percentages in the brain that can show that the brain is improving its connections. It's a really good point. I had one patient.

I warned him that he's going to run out of his nine lives. I don't know how many lives it is, but he was treated with this method with one of my friends in Florida, who's also one of the investigators in our upcoming study. Actually, it's not upcoming. It's finally launched.

This guy got better and then he moved from Florida to California and he stopped doing everything in his program. He did some of it, but he really regressed again. He fell off the map cognitively, so I went through everything, got him back on what he needed. He got better again and then COVID hit. He didn't have the wherewithal to keep everything up and he crashed again. Then we got him back on the program, but you can't keep stopping and then expect you're going to get fully back to where you were is what I'm thinking.

[00:10:26] Jane: When you were saying improvement, you were telling me before we started when we were just chatting about the MoCA scores. You went back and looked at the data from that first study about how high the LEAP was in MoCA. Can you, first of all, define MoCA and then tell folks about the improvement?

[00:10:41] Dr. Toups: Yes, so MoCA stands for Montreal Cognitive Assessment and it's a typical rating scale done both in clinical practice and in research. It's a 30-point test scale and people are given scores that indicate their level of cognitive impairment. In the old days and in more advanced dementia, we used the many mental status exam, but the MoCA is designed to be more sensitive for mild cognitive impairment, which is considered an earlier phase of Alzheimer's.

Everybody with MCI doesn't always go on to Alzheimer's and that's where we can, of course, make a difference when people are just starting to have symptoms. We have the best chance to turn that ship around and get them back on track. The levels of the MoCA, in general, 26 to 30 is considered fairly normal. Then below 26, you're getting into mild cognitive impairment. Then when you get down in the 19 to 20 range, you're getting into mild Alzheimer's.

We had a range of numbers and people say, "Well, what is your average MoCA improvement?" Let me see. Let me look at my notes on that. The average MoCA improvement of all of our patients, it was about four points in our study. The thing is when you started a really high score like we took people of MoCAs of 26 and 27 if they were at that range, they also had to have impairment on a neuropsychiatric battery called CNS Vital Signs that we use for testing.

They had to have impairments in three different tests that we did in order to qualify for the study. If you're already starting at a high MoCA, you don't have much room to go up. You may clinically get better, which we saw, but you don't have statistically that much room to go up. When I looked at the lower MoCA patients, so the people in the 19 to 22, that's mild Alzheimer's. There were nine patients that we had out of the 25 that were in that range. They had an average of 5.3 points increase. If you're 19 and you go to 24--

[00:12:49] Jane: That's big.

[00:12:49] Dr. Toups: 24 is a solid MCI. You're going from mild Alzheimer's to MCI, but even that doesn't tell the whole story because I had several patients in that 19 to 20 range that finished

up with 29s and 30s. I feel like they would test better than I do. [chuckles] Anyway, it was just super exciting for us to do this. It was our first proof-of-concept trial. We didn't have a control arm. We were just first trying to say, "Let's look at these people prospectively. Let's get the same data on everyone and what happens."

Now, we've just launched our next study and we have a wonderful funder. We're funded by a single private donor with a nonprofit. She calls her corporation, Evanthea, Four Winds Foundation. We're very grateful to our donor for sticking with us all these years. She's given us funding to do a bigger study. We're going to have 72 patients enrolled at six different locations, so we have now locations around the country and it's considered a randomized trial. People will be randomized to either the active treatment with the precision medicine approach or to just receive standard neurologic treatment.

We've looked up the protocols of, what do they do at Mayo? What do they do at Columbia? What does a neurologist do? These days, people have now recognized, "Oh, let's check the B12 level. Let's check the vitamin D." That's considered standard neurologic care, but a lot of people in the traditional community say, "Oh, taking supplements doesn't do anything. It doesn't help." I can tell you from seeing many times of people stopping and starting, what a huge difference it makes when you're taking supplements targeted to what your body needs.

We're calling that treatment group, and it is heartbreaking that we can't give everybody the active treatment in the beginning, but we're calling them the "delayed treatment group," because at the end of the nine-month trial, the people that complete that arm will be eligible to have six months of active treatment. They'll get the same active treatment that our active study cohort does. That includes health coach, a nutritionist, an exercise coach, so a lot of support to make the changes that we're asking them to do.

[00:15:12] Jane: What I would like to learn, Dr. Toups, is if someone wants to be in this new study, what are the cities that they need to live near and what are some of the things you're looking for in a good candidate?

[00:15:25] Dr. Toups: Right, that's a great question. We do require that people live within one hour of the six locations because there's a lot of back and forth involved in testing. We need them in our geographic area. People have offered to fly back and forth. That's not going to work. It's too labor-intensive for that. Our six locations are, there's three in Northern California, one in San Rafael in Marin County. That's Dr. Ann Hathaway moving over. I am in the Walnut Creek area just North of Berkeley, Oakland.

Then our other site is east of Sacramento in the El Dorado Hills, so close to Sacramento. That's Dr. Kristine Burke. Then we have Cleveland, Ohio, Dr. Nate Bergman. We have Dr. David Haase in Nashville, Tennessee, and Dr. Craig Tanio in Southeast Florida. He's in Hollywood, Florida, which is just north of Boca, which is just north of Miami, so kind of all of that corridor. If people are interested, it's a pretty easy website to go on and look at it and fill out the forms. It's dementiareversaltrial.com.

[00:16:37] Jane: That's easy. Good, and you're looking for someone who is in the mild stages, very mild stages, not deeply into Alzheimer's at this point?

[00:16:46] Dr. Toups: Yes, they don't have to have a diagnosis, but mild cognitive impairment or early dementia. Within that range, we're taking MoCAs of 18 to 26. We need people that have not yet made any major changes because we need to be able to capture the changes, so I suspect many of your listeners already made a lot of changes in their diet and their lifestyle and their nutrients and things like that.

Somebody that's already instituted those changes won't qualify. It doesn't mean you shouldn't go on and do this kind of work. For the study, we want to get people that haven't made any changes because we're trying to compare. Do the people that do standard care, do they do the same as people that do our procedures and protocols or do our people do better which, of course, we already know that they do?

[00:17:35] Jane: They do.

[00:17:36] Dr. Toups: We need to have a randomized trial to compare that.

[00:17:40] Jane: What are some of the things, a lot of things that you're looking at? From the last trial that you ran, what are some of the things you're finding most common amongst people who are having cognitive decline that you are able to help them with, and then how do you help them with those things?

[00:17:55] Dr. Toups: I think you're talking about what kind of findings contribute to cognitive decline. Dr. Bredesen started out talking about 36 holes in the roof. If you fixed 35 of them and you didn't fix the last one, you're still going to have a leaky roof. Now, we have way more holes than 36 that we look at, but some of the stuff many people are already well aware of that you need for general health, right?

It's your diet. What are you eating? What kind of nutrients? Are you getting enough sleep every night? What are your stress levels like? Those are just foundational things that, of course, we look at and beyond that and even looking at the levels of blood sugar. Diabetes has been called "type 3 dementia," but we know blood sugar destroys not only the blood vessels but the neurons.

Looking at blood sugar control, looking at lipid control, that's destroying the blood vessels if you have hyperlipidemia. It's a big contributor to vascular forms of dementia. The things that I like to stress that I feel people are missing beyond those foundational things are the effect of infections of toxins and lack of hormones. I think those are areas that not everybody is aware of and so maybe we can say a little bit about those if you like.

[00:19:12] Jane: I would love to. Like toxic metals? Is that what you are thinking?

[00:19:16] Dr. Toups: It could be metals and it could be chemical toxins. They're both a big issue. The world has just become so toxic that we all have to really try harder to limit our exposures, but I feel like there's some people that will do complicated detox protocols with IV chelation and the

like. I don't think that's necessary for most people, but I think we have to approach detoxification as something we need to do on a daily basis.

For starters, we have to look at everything we put in our bodies, everything we put on our bodies, the chemicals we use in our homes. Some people are better detoxifiers than others. Some people, their genetics, they can get exposed to toxins and their body takes care of it. Other people, their genetic sorting makes them not detoxify things as well. I had a patient early on that came to me.

She was already in an assisted living facility with moderate dementia and she fairly rapidly was moved to the memory care. She was going down. I tested everything I could to look at what was going on for her and how could we stop this. She was such an interesting case. She did have some cardiovascular risk factors, but the biggest thing-- and it's never just one thing for people. It's a bunch of things. In her, she really did have one big thing when I tested her levels of chemical toxins.

At that time, we were using the Great Plains Labs TOX test, T-O-X. Right now, they're not doing it. They've stopped doing it. They said they were recalibrating machines, but it's been eight or nine months. We don't know if that test is going to come back. We're using the RealTime Labs in our next study for that. They stepped up to the plate. The tox test in this lady's panel, if you have one thing in the red or two things in the red, that's considered really significant.

She had 9 or 11 things in the red. Just almost every chemical was off the charts in the red. It's very interesting. Then what do you think? What is her environmental exposure? If somebody worked in a chemical plant, if somebody was in an agricultural area where they're spraying all kinds of chemicals on the field, there are certain people that have high exposure to these chemicals. Well, guess what she did? She was a schoolteacher.

[00:21:38] Jane: She didn't have that.

[00:21:39] Dr. Toups: She didn't have any high levels of toxic exposures. Her daughter said, "My mom and my parents were always health-conscious. We ate clean food. We didn't have a lot of exposure." What does that tell me? She doesn't detoxify well. Her genetic makeup means that she just accumulated everything that she got. Her daughter was in her 50s and I said to her, "Daughter, think we better get you tested on this and see how your toxic load looks."

It turned out her daughter also had pretty high levels of toxins. It can be the chemical toxins. It can be the heavy metals. Both mercury and lead are known major factors with neurodegeneration. The mercury, it's interesting. I've found quite a few people in my study with high mercury levels. I always test for it. Most of that mercury is coming from seafood and how polluted the oceans have become.

When it's from that source, it's not super hard to clean this up. I would take people off of all seafood, a period of four to six months. I would give them a little liver support to help detoxify further. I like sulforaphanes. I really like Avmacol. It's a product that I like. It's a really nice

sulforaphane. I can see very high levels of mercury come down to zero in six months. It didn't need fancy chelation to get that down.

You can be assured if you leave your mercury levels high, it's known to eat up the brain. The saying, "Mad as a hatter," came from the hatters in the old days that would make hats from felt. The way they made the felt involved processing the fabric with mercury and they all became "mad." They had nerve degeneration from that mercury exposure. That's what I mean by toxins. It can be metals. It can be chemicals. They can be lurking all over your own household.

[00:23:30] Jane: They can.

[00:23:32] Dr. Toups: Detox is a daily thing. We also recommend using a lot of sauna and sweating. There's definitely nice data showing that we can do the sweat. We can mobilize chemicals and metals with the caveat that I tell people, "If you're doing a sauna, you're doing hot yoga, you want to wipe the sweat off while it's coming out because you don't want it to reabsorb.

You're just getting those chemicals out and then you need to get them off and then you need to go jump in the shower and get some soap and wash them off." We've also seen that as an effective adjunct. If people are higher on the chemical burden, then I would be encouraging them to add the sauna in as well. There's nice data on the benefits of sauna for dementia.

[00:24:14] Jane: I know.

[00:24:15] Dr. Toups: Dr. Rhonda Patrick has done some great podcasts about this, highlighting the study done out of Finland and they compared men. In Finland, historically, it's part of the culture to do daily saunas. The men who did daily saunas had a dramatically lower risk of dementia. They compared them to the three-time-a-week sauna. Their risk was higher. Then the once-a-week, their risk was higher. It's quite a major improvement that people can get just by incorporating regular sweating in their lives.

[00:24:48] Jane: You meant you--

[00:24:49] Dr. Toups: That was one of the things. The tox, the infections, and the hormones.

[00:24:53] Jane: You also mentioned the sulforaphane. What was that product again?

[00:24:57] Dr. Toups: Oh, Avmacol, A-V-M-A-C-O-L.

[00:25:01] Jane: Okay, wow.

[00:25:02] Dr. Toups: They've done some research even in autism and schizophrenia and showed benefits. There's some talks you can find about their product on YouTube with one of the child psychiatrists that did the autism studies. I do like companies that do research. They're investing the money to show that their product works. I started using that for brain fog from mycotoxins.

I learned about it originally from Dr. Sharon Hausman-Cohen, who runs IntellxxDNA, which has fantastic DNA panels. She might be interesting for you to interview because she really has taught me a lot about the modifiers genetically within Alzheimer's. She mentioned that the Avmacol product had been so helpful for her patients with mold and mycotoxin exposure because you get a lot of brain fog.

Now, the whole world knows after COVID what brain fog is because COVID likes to go after the brain. Many people now are experiencing this brain fog. She said it was super helpful for that. I have to tell you a little story. When I learned about it, I got some to try out. My assistant in my office got some to try out. I went away for almost a week to give a talk. I came back and my assistant looked totally different.

I said, "Oh, my God, what's going on? You look fantastic." He got a big smile and he said, "It's the Avmacol." He had been treated for both Lyme disease and for mycotoxins. It basically slowed down his brain processing. Very smart guy. It wasn't his IQ. It was his processing from what was happening to his brain. After a week on the Avmacol, his brain was just clicking. I could see it dramatically. Both of us became big fans of Avmacol at that point.

[00:26:49] Jane: That's great.

[00:26:49] Dr. Toups: They have an interesting protocol that they recommend for some people that are in need of more detoxification. The standard doses for an adult is two a day of their regular strength Avmacol. If you really need to clear out stuff, they recommend going up to eight a day. They say start at two. The next day, go to three. Next day, go to four. Just bump it up as fast as you feel like you can tolerate it up to eight a day.

They're kind of little, so it's not that hard to pop a few. Then they recommend taking eight from two to four weeks. If somebody really needs a lot, I tell them, "Maybe you should stay on this for a month." Then you gradually taper yourself back down to the two-a-day as a maintenance dose. My assistant, he ended up going to 10 a day. He just felt better at that dose and he stayed there for a while and then tapered back down.

Anyway, interesting story. It was so dramatic that I've been a fan of that part. I have a lot of colleagues that use it and also feel like it's helpful. Because when the brain is foggy, it's because things are gumming up all our biochemistry and physiology and causing inflammation in our brain. The sulforaphanes definitely, they say that this product regulates 200 phase II liver detox enzymes. We have all kinds of different enzymes that our liver is using to support us, so this really helps to upregulate those and make them work better.

[00:28:13] Jane: Thank you for that tip. That's wonderful because mycotoxins and Lyme are both things that I'm covering from. I try to take sulforaphanes, but I didn't have a great product, so thank you. Tell me about hormones. What if a woman's already well past menopause? Is it still okay to start hormone replacement?

[00:28:29] Dr. Toups: Well, there's a simple answer. What does the medical community say? The simple answer from all the research that I'm in a study group with Dr. Bredesen and these other investigators and working with brain research and treatment for a long time. We've looked at so many studies on the hormones. The problem with our hormone studies, unless there's immediate risk of current breast cancer, for most people, it's safe.

It seems safe and well-tolerated at any age to start the hormones. If you just look at the studies, that's not what it's going to tell you. They're still being thrown out there. For the most part, we're done with synthetic hormones, the old Premarin and Provera, the pregnant horses' urine that they make Premarin from, and this oral estrogen. We know that when you take oral estrogen, it goes through first-pass metabolism in the liver, and it creates metabolites that cause cancer.

Real caveat is you don't want to take oral estrogen. You want to take it through your skin because it's absorbed directly and it doesn't have to go through that breakdown into the liver. More and more studies are coming out with the bioidenticals. I think they've been around 20 years now or something. Bioidentical hormones, they're regular prescriptions and they're generic. We've used estrogen patches for a majority of women and whole bunch of generic estrogen patches.

They're accessible from a medication standpoint, though I would say in learning that not all patches are equal. Sometimes a woman will be on one brand a patch and her pharmacy will switch to another brand and her levels will fall off the curve. That's another thing to be aware of. If you change brands, you need to recheck your levels. There's just such interesting data about the hormones.

Stanford did a study. They took women that were high risk for Alzheimer's that had been on hormones. They randomized them either to stay on the hormones or stop them. They followed them for two years. They did cognitive testing and they did head scans. What they found at the end of those two years is that 100% of the women who stopped their hormones had cognitive decline. They could see it on the head scans.

Okay, can we say that taking the hormones directly prevented that? Well, you can't exactly say that, but it's pretty darn compelling. This is what we see clinically. We see when women lose their hormones, their brain suffers. Our brain is full of receptors for estrogen, progesterone, testosterone, pregnenolone. Both men and women have all of these receptors in the brain that are thought of as sex hormones, but they're not just sex hormones.

You have estrogen receptors all over your body, certainly in your bones, in your blood vessels. When we go through menopause, before menopause, women have less heart disease than men. After they go through menopause, it starts rapidly approaching the risk levels of men because we lose the estrogen protection. Same thing with the bones. The estrogen keeps our bones well. I think it's really a travesty that many people wait until they've completed menopause to start saying, "Oh, maybe I should go on hormones."

Well, you've lost a bunch of years where your hormones were declining, declining, declining, and then I watch the osteopenia go up and up and up. The hormones are protective for many things in

our body, especially our brains. When we start the hormones of somebody that's been off of them or at any age even when people need them, some people don't notice much. Other people have major awakenings of their brain.

One of the things I like to say. There was just a thread on one of the physician community groups on Facebook. A doctor was saying she was going through menopause and she was having a lot of word-finding difficulty. She couldn't find the right words for things and she was saying the wrong word. It was correct that other people on the thread said, "Oh, this is menopause, right?" Yes, we see that at menopause all the time.

That happened to me when I was going through the end of menopause or even before. I was having a lot of word-finding difficulty. I went to my doctor like many of us do and I said, "Something's wrong." I can't figure out what I want to say and I'm normally pretty good at saying what I want to say. She said, "Oh, welcome to perimenopause. This is typical of perimenopause." I said, "Oh, this is menopause," and I felt comforted for about 10 minutes.

Then I got home and I was thinking about it and I go, "Wait a minute. Okay. As women, 50% of us are going to get Alzheimer's, right? You or me." You and I are both on that road before. Maybe those of us that are symptomatic with the decline in hormones, maybe we're going to have more risk than other people. When I was first put on hormones, they were helpful. Back then, the World Health Organization came out looking at the risks of hormones.

That's one that used primarily synthetic hormones. It said these hormones are going to cause cancer. Like everyone else, I stopped my hormones back then. This study that I didn't know enough to read carefully said these are going to cause cancer for me. I lost some valuable years there. I do think it's important for women to understand the role of the hormones in the brain. The bioidenticals are safe and effective. You wouldn't want to use estrogen if you have breast cancer because most breast cancers are sensitive to estrogen.

If you're taking estrogen, you're going to feed that breast cancer. Of course, we want to have a clear mammogram. Sometimes people need ultrasounds. Sometimes, occasionally, people need MRIs. You want to make sure there's no cancer in there before you give estrogen. If you don't have a cancer, some of these interesting studies showing that after women have had breast cancer, if you give them hormone replacement after the cancer's all gone that there seems to be less risk of recurrence-

[00:34:43] Jane: Oh, really?

[00:34:43] Dr. Toups: -because the hormones help the breast tissue to stay healthy. When we lose our estrogen, the breast shrinks. It atrophies and it's not healthy. Our breasts are meant to be plump and round and that's a healthy tissue. Without the estrogen, the breasts shrink up. They're missing what they need. Hormones are trophic. They're life-giving. They give our body what we need. Many people tell me, "Well, if God wanted us to have hormones, we would've kept them, right?"

We've cheated evolution in the last century. Until a century ago, we didn't live much past menopause or andropause in men. Evolution is designed only to see us through our reproductive years. That's all it cares about. The concept of evolution is to pass on our genes. After that, it doesn't matter. We can live half our life after menopause these days. That's a lot of years without your hormones. Interestingly, the hormones are so important to the brain that the brain makes hormones.

We think of, typically, the sex hormones coming from the ovaries and from the testicles, but it turns out that our brain makes its own supply of estrogen and it makes its own supply of progesterone. The problem is that we can disrupt the brain making those things by the effects of toxins and infections and mycotoxins and stress and depression. Anything that you know is inflaming our brain can disrupt the HPA axis, the hypothalamic-pituitary-adrenal, and even to the gonads.

Anything that disrupts the brain is going to disrupt the production of the brain hormones. I'm a huge believer. We use them safely, I think, and cautiously. I see too many of my patients go to gynecologists. They might be put on hormones, but they don't measure the levels. How do you know? Is that enough for that patient? Is that level too high for that patient? I don't think we need to have patients on these super-physiologic levels.

I do know some. I have a friend that I respect the heck out of that is a brilliant integrative gynecologist. She's taught me a lot of things, especially about these effects of estrogen all over the body. Her read on things, she likes to use higher levels of the estrogen in the blood than I feel comfortable with. We have ranges in our groups that we've decided on that we think move the needle. It's like give enough, but more isn't always better with most things, right? There's a sweet spot.

It's just give enough of the hormones and you can measure the levels easily. Quest, Labcorp, estrogen, progesterone, testosterone. We also measure pregnenolone and DHEA. Those are important brain hormones in huge body of research about pregnenolone deficiency and what happens with the brain and the cardiovascular system with that. Those two, the DHEA and pregnenolone, are supplements. You don't need a prescription for those, but it doesn't mean that they're harmless and you can just take as much as you want.

I never recommend them unless I do a blood test and find out that someone needs it because not everybody needs those things. I think that's another caveat that I'd like to say about this whole approach that we work with. It really does help to work with a physician that can test everything for you and help you to know what do you need for your body because we don't all need the same things. It is a waste of money and possibly dangerous if you're taking things that you don't need and could hurt you by having too much.

[00:38:26] Jane: We should probably wrap. I could talk to you for hours, Dr. Toups. You just know so much, and thank you. Thank you for sharing my--

[00:38:33] Dr. Toups: Oh, I can talk for hours. I'm sorry. I always have so much to say.

[00:38:37] Jane: It's great. If someone is coming into this and thinking, "Okay, I know some with mild cognitive impairment. I have brain fog myself," where would you say find a functional medicine physician right away, try to get to the bottom of all these different things that may be causing this, and it's fixable? They shouldn't just blow it off. "Oh, I'll do it next year. I'll do it next year." In the meantime, their cognitive level keeps going down. What you probably want to leave people with is, "You can do something about this, so jump on it."

[00:39:08] Dr. Toups: Of course. Yes, of course, you can. Let me just give you a little story of the importance of that. I had a patient in my last study. He was a physician. Very smart guy, surgical subspecialty, inventor, started a company with inventions. Great brain, right? He had gone to his doctor a couple of years, two or three years before he saw me, and said, "I am having problems with my memory."

They gave a little neuropsych testing battery and they said, "Most of your scores are not bad, except your verbal memory." His verbal memory was about in the 19th percentile then, which is not good, right? 50% is normal and this guy should be above average by merit of his educational level and all that he had done. They said, "Don't worry about it. Just eat right, get sleep, take care of yourself." What did he do? Nothing.

This doctor said, "Oh, you're okay. It's not that big a deal," so he did nothing. Then two years later, he heard about our study, did all the testing. Of course, he qualified for the study. At that point, his verbal memory had come down to the ninth percentile or something. He had lost ground and it was in the toilet. That's in the toilet. He was having a lot of trouble functioning. He's trying to remember everything in meetings.

I think this underscores the danger of ignoring it and your doctor saying, "Oh, we all have senior moments. We all have some change in our brain with aging," and that is not true. Let me just tell you. This guy finished back up at the 95th or 6th percentile at the end of the study. He went from this major problem. Thank goodness, it wasn't too late to take him back up to normal. I would say, don't ignore these things.

There's something now in the vernacular called "subjective cognitive impairment." That means when I think I have a problem. If your spidey sense or your intuition says, "Gosh, I think I'm having a problem," pay attention to that. Sometimes there's low-hanging fruit that can be easily addressed. Obviously, as I mentioned earlier, foundation of general health, right? Eating right, exercising.

Exercise is a huge and free thing you can do every day to help your brain, but the two best-validated things we know for neuroplasticity and make new connections in our brain are exercise and meditation. You don't need a lot of money to do those things, right? That's something that everyone can do. I can go on and on about the specifics, but those two things are great. Meditation doesn't have to be sitting in a lotus position. Meditation is, basically, it's mindfulness.

Anytime you turn off your brain and come into your body and be present in the moment can give you those benefits. I tell people, "Look, go on a walk and leave your cell phone and just be present and listen to the birds. Listen and smell the smells and watch the bees fly by. Just be present and

shut off all that chatter in your brain." That's a meditation. Anyway, those are things I think everybody can do work on their basic health.

I am a big believer in testing. I think it's one of the criticisms leveled at us in functional medicine, though we test too many things. Well, how can you know until you test it? I find the craziest things by testing and many of them are very easy to correct. If you don't correct them, you've got to keep your thyroid hormones regulated. We have an epidemic of thyroid disease these days. Hashimoto's was not even a thing when I went to medical school in the '80s.

I don't even remember learning about it then. Now, it seems like every third or fourth person that I see has Hashimoto's, which is an autoimmune form of thyroid disease. Autoimmunity is something that we test for. I can't tell you how many people have no idea that they're suffering from autoimmune diseases, or their T-cells aren't working, their immune system isn't working.

We've learned a lot about the immune system because of the effects of COVID on the immune system, but there's many other diseases and viruses that I test for that affect the brain and affect the immune system. We have protocols and things that we can do to help lower the load and the levels of those infections, both viruses. Lyme disease is a huge thing. I found quite a few of my patients clearly had had Lyme disease, and then it's trying to determine, is it still a factor for them? Does it need more treatment?

Lyme disease is just like syphilis. It's a spirochete in the same class as syphilis. Most people have learned somehow in their childhood that in the 1800s, a man would get syphilis and he would get over the STD component of it. Down the road, he would go crazy, go mad. That was the terminology for dementia back then because it was eating up their brain. There's an interesting case of a woman who was treated supposedly successfully for Lyme disease.

She became demented and died. They autopsied her brain and they found live spirochetes in her brain. That's another hidden infection that if you go and get a test at Quest in Lyme, it's not going to tell you whether you have Lyme disease because they're only testing for one or two strains. There's many, many strains of Lyme that they don't test for. They also don't test for all the bands.

When they test for Lyme, the first level test they run, an electrophoretic gel, and the different proteins migrate in a gel and make bands when they stain them. There's a number of bands that will indicate reactions to different components of the Lyme organism. They threw out the ones that were affected by the Lyme vaccine. Now, the Lyme vaccine was many years ago. It was only used briefly because there were problems with it.

Very few people have had that vaccine, and yet all of the testing at our top two lab companies, Labcorp and Quest, is based on, "Oh, they might have taken that vaccine, so we won't test them for all these other bands." We have to use outside specialty companies to do that testing, which, unfortunately, generally means more costs for people because insurance doesn't always cover the specialty testing. If you're having cognitive decline, you want to know if you have tick-borne illness. You want to know if you're being exposed to mycotoxins.

[00:45:59] Jane: On mold.

[00:46:00] Dr. Toups: We could spend a couple of hours on the effects of mold and mycotoxins, right? That's a really hard concept for people to get their head around. Some of the species of mold are very neurodegenerative. Aspergillus can cause Parkinsonian symptoms. If you have mold in your house, it needs to be tested. You can collect dust in your house and send it in yourself to get the first level of reading on it and because you don't have to have visible mold to have problems with mold in your house.

Sometimes people have had floods or leaks and they've been fixed. They don't know it's a problem. Historically, we've used a company called Mycometrics for the home mold testing, and they're a good company. Now, in our study, we're using a newer company called Lis Biotech. It's L-I-S, and then Biotech, all one word. They were started by one of our most trusted mold advisors who's on the board of ISEAI, the International Society for Environmentally Acquired Illness.

I don't know if you're familiar with that organization, but that's one of our main professional groups that works with environmental illnesses, meaning Lyme, mold, toxins, those kinds of things. Larry Schwartz, one of the environmental inspectors and mold inspectors, consulted for this company. They're less expensive, which, of course, helps all of us because the cost of testing out of pocket can add up. They give nice reports. They come back quickly. The price is $210 to $240, something in that range. Basically, you order a test called an ERMI, E-R-M-I.

That's going to test more strains of mold. They have a less expensive one, but it doesn't test that many strains. I'll just give you what I've learned to do with that. They send you a Swiffer dust cloth. One of my trusted mold inspectors, people from ISEAI organization taught me this. When he inspected my house, he said, "Fold it in quarters." You're going to collect dust and you just want to make that one quarter as dusty as possible. Because when they get it, they're going to vacuum off the dust, and then they PCR test it to look for the different strains genetically that are there and how many of them.

If the dust is concentrated, it's easier for them to vacuum it off. He says you don't want to collect ancient dust. The top of your refrigerator, under your refrigerator, most people don't clean regularly there. That dust is called ancient dust. It's going to overrepresent your mold level. Don't collect that. The idea is to dust your house and wait two weeks and collect fresh dust.

[00:48:39] Jane: Dr. Toups, I just want to thank you so much for being with us today. You are fabulous in how you are changing the outlook for people who have some cognitive issues. You've helped us tons. Thank you.

[00:48:52] Dr. Toups: Oh, well, thank you so much for having me and helping to get this word out because, as you said, I think the biggest thing is for people to realize that there's hope. I like to leave people with my favorite saying is, "Dementia is not a death sentence." Historically, you get diagnosed. They say, "Get your affairs in order." This is not true. If you buy into that, then that's the path that you're going to go down. It's exciting. We have so many clinical case reports. Now,

we're getting research data also to further validate that. It's a labor-intensive thing to make all these changes and invest in it.

Once people get comfortable with doing that, other than the cost of whatever supplements you need, it's not an ongoing expense. If you have to go in assisted living around here in the San Francisco area, it's well over $100,000 a year. To me, it's like invest, do what you need to do to understand that there really is hope. The sooner we catch these things, the better. Keeping up with these things as you start moving up into your 50s, we're seeing dementia younger and younger because of what's happening in the toxins in the world. Don't ignore it and don't let it become a death sentence.

[00:50:08] Jane: Boy, thank you. Thank you. Wise words.

[music]

[00:50:14] Jane: You've been listening to the *Cutting Edge Health: Preventing Cognitive Decline* podcast. Any information shared here is for educational purposes only. Guest opinions are their own. This podcast is not responsible for the veracity of their statements. Do not use any of this information without first talking to your doctor. Cutting Edge Health, LLC is not responsible for what may happen to you if you use their information in place of official advice from a medical professional. Thanks for listening. Be well.

[music]

You've been listening to the *Cutting Edge Health podcast* created and hosted by Jane Rogers. The website is cuttingedgehealth.com. We hope you enjoyed the show and would very much appreciate your writing a review. They help a lot and we read each one. Any information shared on this podcast is for educational purposes only. Guest opinions are their own.

This podcast is not responsible for the veracity of their statements. The comments expressed are not medical advice. Do not use any of this information without first talking to your doctor. This podcast and Jane Rogers disclaim responsibility for any adverse effects from the use of any information presented. Thank you for listening and have a beautiful day.