Interview with a First Survivor of Alzheimer's. Transcript

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Introduction and Sally Weineru2019s Background

Hi, everybody. Welcome again to the Reverse Alzheimer's Summit. I'm here with doctor Sally Weiner. Such a pleasure to have you here today. Sally, thanks so much for joining us.

Thank you. And just a little background. Doctor, Sally Weirich, has a PhD in educational research. She worked and she was both nationally and internationally recognized for her work on prostate cancer screening.

And as she taught for many years that Alzheimer's is untreatable. As part of her in nursing teaching. And, she is in the first survivors book, and I think a wonderful example on numerous levels.

And we'll go into those. So I thought I would I thought it would be very illustrative to talk to someone who's actually been through this, and really done a spectacular job.

So, Sally, maybe you could start just by telling us what were your early symptoms? Some of the things that that, bothered you at the beginning. I had read a lot, quote normal aging changes.

Yeah. And I had all those, but I had them to a greater intensity and degree. Yeah. And, it did a lot of embarrassing things. Like, I would get to my doctor's office would and would remember at that time I did not have my pocket book, and therefore I did not have my insurance card.

I would get to the gas station at Joe Gas, need my credit card to pay for my gas, and not have a credit card. And so I had a lot of, forgetful, things I did that I hadn't done before that definitely interfered with day to day living.

I was starting had trouble even, deciding what to wear. It took me three times as long, and I was constantly running late. And one day I looked at a clock and, Oh, I have to ask.

I don't remember how it came up, but I could not remember how to draw the second hand. I did not know whether the hour hand or the second hand. I did not know which which which. Yeah.

And then I denied it or didn't want to think about it, because I didn't think there was any treatment for it, like most people do, or many people do. And, then I forgot to pick three grandchildren up to take it to school one day, and then I forgot again within the same month.

And I would never forget to take my grandchildren at school. That apple of my eye. And that was when I said, you know, forget the denial, Sally. You've got Alzheimer's.

Yeah. And, you know, I should just, point out here while you're while you're telling your story, that, you know, one of the common criticisms that many people receive when we claim that we're reversing cognitive decline, people say, well, you know, this person really didn't have any evidence of Alzheimer's.

You're just assuming that, well, in your case, you had everything. So you had ApoE4 positive. So you had a single copy. Associated with Alzheimer's.

Early Alzheimeru2019s Symptoms and Diagnosis

You had a Pet scan that was amyloid positive. So again, showing that very clearly you had Alzheimer's disease. You know, you had a Moca score of 24.5, which is typically considered MCI.

But for someone who has a doctorate and is working at a school teacher training, and this is really what I would call late stage MCI, you had both the kind of typical parietal symptoms with trouble with the clock and trouble with

spatial issues, and also the amnestic issues with trouble picking up your granddaughter.

So you really had the typical. The ApoE4 is typically associated with the amnestic side. And the toxicity which you turned out to have, of course, is typically associated, with the, you know, is with the non amnestic sort of presentation.

And you clearly showed both of those. And then you had one of thing. We've seen a number of times you actually got worse with the anti amyloid antibodies.

So if you could continue that on talked a little bit about how you got into the trial. And your response to being treated with an anti amyloid antibody.

I retired from research in 2008. And as a funded researcher I believe strongly in research. And so I actively sought out research studies to, deal with my Alzheimer's, which I thought felt like I had, and I was hoping I was at the preventive stage at that time.

And so I heard about this national study that started I enrolled in 2015. The cohort that I enrolled in actually started in 2014. And it was recruiting, non symptomatic or mild symptomatic, Alzheimer's patients.

Yeah. People in the community nationwide who, were positive or beta amyloid plaques and, I did not know whether I was randomized to the placebo or control, but before I started that study, I did them mild cognitive impairment so I can know what my score was.

Yeah. Much about cognitive assessment. And then I also did the subtracting seven from 100. Yeah. As my way of measuring roughly how my cognition was doing.

And each month I got worse and worse and, started the third month, started getting headaches, irritability, anxiety, which I had never had before and really didn't know how to handle.

And, ability to remember, and not forgetting things, increased significantly in severity. So after eight months, after withdrawal, then the trial encouraged me to take a break, which I did for three months, and then have to think about even more.

I withdrew from the study. Yeah. And I think it's certainly lucky you did. One of the other people that we dealt with years ago, just continued. His wife said, the doctors know what they're doing, so it's okay if he gets worse.

And, he went from a 22 to a six over 18 months. So it's it's tough. And, of course it's it's impossible to know causality, but the temporal association is often striking.

So, you know, it's a good thing that you that you got out of that when you did. And then, where did you go from there? My husband heard about you on a talk show, Paper pharmacy.

December of 2015. You were my nice Christmas present that year. And I called you wanting to be enrolled in your research study, and. Yeah, which is understandable to our be would not allow out-of-state enrollees.

Right. But you agreed to work with me and my physician and through a joint telephone call with my physician, and then ended up completing the Cognos copy that first Cognos copy.

I've had yearly diagnostic copy since then. Yeah, in July of 2016. Okay. And I had everything wrong. And the, I had I was positive for five of the six different types of Alzheimer's and the one I was not positive for, which was, vascular.

I had problems with in that my total cholesterol and triglycerides were record low. And you told me what a physician had never told me before, which was that I needed healthy fats in my brain for function.

Well, I always before had been complimented heavily on my, low cholesterol and low triglycerides and, the other thing I would add, when there is a little different answer from your my answer to your original question of when did I first know?

Yeah, around 2016, you came out with your publication describing type three or inhalation toxins, and in that you describe what had happened to me in year 2000.

16 years before that time when I had moved to a new place and attributed my depression to, the move and to the pressure to do research.

Anti-Amyloid Trial and Worsening Symptoms

You know, research driven university. And but then I lived in a home with mold in the basement, and I also had the low zinc, although I didn't know it at the time.

I had the biomarkers of losing low cholesterol. And there are several others that I don't remember about. Ask you to add now. There you go. Triglycerides. Yeah.

You had the, and you had the TGF beta one that was quite high, etc., etc.. Yeah. See, for all that. Yeah. So I realized in retrospect that my all time I had really started in 2000.

Yeah. I just did not know it at the time. Yeah. And again, this illustrates a very important point. When people have looked longitudinally, you really looking at about 20 years typically between the onset the pathophysiological changes and a diagnosis of Alzheimer's.

So it makes perfect sense here. You were having problems in 2011. You were already well into the MCI stage and the problems really began symptomatically.

So you really had CCI as early as 2000 and as the Epidemiol patients have shown us, MCI tends to last about ten years. That fits with you very well. And then you went into MCI and you were fairly well along in MCI when you started getting on the program.

So you are now six years and talk a little bit about, first of all, what what did you notice in terms of changes? Because another thing that we hear very frequently is, well, I've been on this for a couple of months and I'm not noticing huge improvements.

You know, I'll take I'm going to look for something different, but you've really stuck with it. And I think you're a great example of someone who has really sustained you've got your improvement, and now you're six years on and continuing.

So talk about if you would, the first things that you noticed. And changes in improvements. Is that correct? Yes, yes. My research background kicked in and I nearly the two things I started doing right away was sleep, more sleep and, eating healthier.

Yeah. But I also start up, started, meditating every day and it was hard for me to sit down and do nothing to meditate. I'll meditate. And you're not doing nothing.

But you're not. Yeah, it's not working. You're inactive for some. Yeah. And, so I, did again that subtracting seven from 100. Yeah. And kept track of, how fast I was at that time.

I could not do accurately. But I also kept track of the time. And after a month of meditating each morning, I started out. And the other thing I did in that lifestyle change is I would start it slowly.

So I started out meditating 15 minutes each morning, and then I increased to a half an hour and after a month of that, I saw that I was one subtracted seven from 100 correctly and two quicker.

So that's what I've encouraged everyone I've talked to to identify something that they're having problems with. Yeah, a real quick, immediate one that I could easily remember and see.

The difference is I would go from start at, say, at the kitchen, go to the bedroom to get something, and I get to the bedroom and forget what I was going to get.

Yeah. There is a real common, thing I hear a lot of people talk about, and that changed. I could remember what I went to get. Yeah, I have to go back to the kitchen or going back to the kitchen and not remembering it.

Joining the Reversal Program and Early Improvements

So but I think cognitive changes, I'm really tuned in now. I still can relax really easy. I recently had surgery and did real well with it. Yeah. But I now have trouble recalling names.

So for me, any time I call my grandchildren by the wrong name, mix up my stage name. Brian, name Molly. And one thing, if I call Emma Molly or the other way around, that's my sign that I'm doing something wrong, and, I need to change it.

So what I'd encourage people to do is keep a. And thankfully, I did keep electronic record of what I could and couldn't do and the date at which I did certain behavior.

What I get the quickest changes for is my, exercise. Yeah, I increase my exercise. You recommend at least, 30 minutes a day. Five days a week. I had already been doing that and increased two hours.

So I can see immediately daily changes in that. But other things that were really hard for me to do, like, following the Dirty Dozen and only eating. Yeah.

The 12 foods that, continue to be contaminated even if you wash them. That was hard for me to do, right? I still have trouble and struggle with ketosis.

All right. But I have given up my sugars and my carbohydrates, and and when I am ketosis, my husband has real good metabolic flexibility, and he can eat all kind of things.

And the next day he would be ketosis. Wow. I can't, but when I am, I can tell an improvement in cognition. Yeah. Many people say that that ketosis really is associated with an improvement in their cognition.

And you brought up another good point, which is that everyone has some natural variability and it goes with how they've slept, how much stress they're under, all these sorts of things, how much stimulation they've had.

And we have one, one guy, brilliant physician, who loves to cheat, and, he loves to eat ice cream. And so what he'll do is he, he does the same thing that he notices that you do with the first thing that he has is a little bit of trouble with naming.

And so he'll just fix it. So he cheats no more than what gives him a little trouble with naming. Then he can do everything else. Discipline. Of course, we'd like him to quit doing that and do even better, but he does very, very well, with with that degree of cheating.

So there is this variability and we want to go on the other hand, we want to go sort two thing up instead of sort to thing down. That's that's the key.

So, so you know, and you you mentioned earlier that people told you you had a good cholesterol. So you had a triglyceride of 29. So of course that looks very good when you say, oh, is this person have vascular disease.

But it's one of the kick offs is, you know, one of the hints that, oh my gosh, this person might actually have a toxin associated Alzheimer's disease.

And so if you could talk a little bit about what you have done to address the toxicity, have you been on the Shoemaker protocol or a variation thereof?

And what sorts of things, have you done? And I'll start off by saying in your previous talks and in your book, you talk about type three or the toxicity being the hardest form of Alzheimer's or type of Alzheimer's to deal with.

And I have lived that. I agree, yes and opposite. And in fact, I'm still dealing with it, and I've decided I'll probably have to deal with it for a lifetime.

And, Christmas present this year that I will be getting in July is a sauna to deal with the toxins. Fantastic. But I started out taking the lovely coldest of me, and I did follow the shoemaker protocol.

And I found a physician who was trained in the Shoemaker protocol in South Carolina. But looking online, and I started out with the lovely, a costar in Maine and then went through the 13 different steps, in the Shoemaker protocol for treatment.

Yeah. And, the, a lot of, what I've done has been extensive, unfortunately, and the most extensive supplement I took with there for basso and chest peptide, I think is the correct.

And, I can look up and give you, I'll email you later if it's a different date, but I think I took that, let's say 15 months. And I stopped it not because it wasn't work and it worked great, but because of the cost and my blood, that is my TGF beta and the C for A were normal as long as I was taking it.

But once I stopped it, they, increased and that you again became abnormal. Right. And and now it's all and, partly the doctor. Nathan but com and I'm doing the, I'd call something plains Tess white great.

Great plains lab at JPL. Yeah, yeah. Great Plains test. And the first time I was toxic, for different, toxicity. The last one, one had been corrected, but I still am positive for the Aspergillus.

And one more. Right. Even though I've been taking GI detox and, activated charcoal. Yeah. And then the other thing in your treatment under the Shoemaker protocol, when you're under treatment, your symptoms increase in severity.

And so at any time I would go into other indoors which hadn't been mode remediated, the home had to be more remediated. How much positive it had to do, all the more remediation part of it, even though it was a relatively new home at that time we had built, it was only eight years old, right?

It and so I was safe in my home, but I wasn't safe in any other indoors. And I would react with symptoms of Sirs, chronic inflammation response syndrome.

Yeah, depression and anxiety were the worst symptoms, but I also would have vertigo. I couldn't walk straight. Wow. And, I would have, I would have insomnia after exposure.

I would have 4 or 5 other symptoms that I can't remember right now. But it was not fun to go into other indoor damage. So basically, I was homebound, I could go outside and all.

I did great. I was homebound for over two years. Once I got the ad, the blue test, I know. And for that substance. And it included vitamin B12, right.

And sodium butyrate. Yeah. Got better. And now I can go into limited other indoors. Usually if it's an older building, I will react negatively to it.

Addressing Toxicity and Mold Exposure

But the good part is now reaction now is that oh and cognitive thinking in what's called brain fog. And so I would

have with every exposure. Now my first, symptom that I have from exposure to other indoors that are contaminated is, brain fog.

I have trouble with names. Yeah. I don't get depressed or anxious, which is really nice. Yeah. Fantastic. And I should point out to everyone, your Moca score went from 24.5 to 30, and now, you know, repeated testing.

You get 30 or 29 every time, both perfectly normal. So that's fantastic. And you know, again, if you go by the statistics, someone who began symptoms, which would really be the beginning of Sy in 2000, 22 years later, would likely be in a nursing home or would have passed away.

And you are doing absolutely great. So if you maybe talk a little bit about some of the things you do each day, I know you're a kayaker and you're a swimmer, and you enjoy all sorts of things going places, doing things with your husband and getting out there.

You live in a beautiful area in South Carolina. And, and, talk a little bit about what you're doing on a day to day basis, if you would. Okay. And before I do, let me comment.

The one other thing I did on toxicity that I think you probably will include, but for some people it will be relevant and still sleep outdoors in a oh wow.

And that when I sleep indoors I can now sleep. But it's not a deep sleep. It's a sleep that you look at. You feel like you haven't slept, but you look at the clock and hours go by and I'll wake up either 4 or 5 times a night.

If I sleep outside, I sleep like a baby. I'll wake up one. Interesting. And that's it. Yeah, yeah. Deep sleep that I really wake rested. So for someone who's like me, in my mind, I had that mobile exposure and I didn't start treatment to a 16, 17 years later, it's very contaminated.

Like I was from toxicity. Sleeping outside might be the answer. This is a really good point. Yeah. And then now what I do on a daily basis, I wake up and, usually I'll wake up slowly and wake up with some form of meditation.

I'm a Christian, so, for me, spiritual. But I think any form of meditation when you're waking up and the sunlight, you had that golden glow and you're kind of half awake and half asleep, it's like your senses are at a greater alertness. And, meditation is just full at that stage.

Yeah. I don't usually eat until about 10 a.m. because of the keto flex. Right. Well, three diet and six I am positive for ApoE4. I do the, fasting 15 hours and usually 16 hours between dinner and breakfast.

Got it. And then, I'll do whatever I want in the morning before breakfast. It might be exercise is usually meditation. I have to work on my meditation.

I have a tendency was I have traveled like my husband. I recently did this last week to Myrtle Beach. I get back home and I don't want to do meditation, but ideally I'll meditate in the morning.

I very often I would do some form of exercise, I do Pilates and yoga, and I have a bicycle I use at home. But some summer coming, very often. Now get out and kayak eight before the winds blow up on the lake.

We do that, twice, 2 or 3 times a week, and then also in the summer has to do a three times a week. And for the last three years I have swam 1.7 miles.

I dam and, it's mainly high school swimmers who swim it. Wow. But I also announced the oldest one last year. But okay, me if I came in last, but at least I finished.

That's amazing. You're swimming 1.7 miles. Wow. Fantastic. And now swim in the lake out in front on the. And I have a little boy. So that I kind of let people know I'm around.

Yeah. And, so they off now do some form of meditation and exercise in the morning, then, either have breakfast at myself, but my husband's gone now or he and I don't have time together, and that's a fun social time.

And when I was homebound with masseuses, chronic inflammation response syndrome, I usually would have someone I would call every day and talk by phone.

I talk to my sister every day now, but I would have different plans. I would call either weekly or monthly for my socialization. And I think socialization is an important part of cognition.

And then, I don't know what I'd do with the rest of the day, but now, okay, some of the things I do because I don't have enough time to get everything done.

Yeah, yeah, I do spend a lot of time on cognition, whether it's doing my supplements or looking up something, or keeping track of what I've done, or looking at what I need to do or, and usually I don't have one thing I'm working on that's the problem.

Okay. And I'll, you know, either look online or, think or meditate or problem solve how I can do that better. Yeah. And then two days a week, I take my granddaughter up from school.

The, the youngest one now is an eighth grader. And so I only have one more year before she'll be driving. Yeah. And I pick her up from school, and then very often after training ends, like, tonight, I'm going to a granddaughter's soccer game, and Friday night, I'm going to a social event at an outdoor, gardening center.

Yeah. And last night I went to a Bible study. So we're off now. Do something social. Maybe one or 2 or 3 times a week. Yeah. And I love to read. I like a my favorite type of reading now is historical fiction.

Yeah. Which I really like. So I like it slow, I like it. Yeah. You're doing great. And so I also, I think one of the things that you've done beautifully, which we all always recommend to people, is please keep tweaking, please.

You know, no matter how good you are. Let's see, you know, let's see if there's anything that's been missed. Let's see if there are things that can be improved.

Let's see if there are things. Perhaps there are mycotoxins that are still there, or perhaps there are there are issues with you mentioned ketosis, getting into ketosis and being metabolically flexible.

Such a huge issue, reducing some stress. You know, there are so many things or some people will find, oh, this person actually has some infection that had been undiagnosed.

And they still may have improved, but they may have plateaued. So you've really done a great job with continuing to tweak things. And so I think I want to congratulate you on that, but I want to go back for a moment.

Go back to 2000, when you had your first symptoms. How old were you at that time? And 74 now, in 2022. 22 years ago? Yeah. From 52 to 52. Yeah.

Daily Routine, Lifestyle, and Ongoing Optimization

So so again, this and this is something that we see with toxicity all the time that people in their early 50s, the most common that will present with those initial symptoms of toxicity, we believe that some of that may be due to the fact that you're going through this so-called osteo classic burst at that time.

So you're now releasing some of the toxins that have been sequestered into your bone. And that's well documented with things like lead less well documented with things like mycotoxins.

But it is a period where so many people seem to have their first symptoms. So again, that fits very well with your exposure. And then, if you could talk a little bit about where you stand now, you said that you stopped the VIP.

And of course, there are less severe binders than polystyrene, you know, bentonite clay and all sorts of things like that. Are you currently on binders or not?

Yes, I am, and I'm to be talking to doctor brought in a physician who's been trained in the protocol in North Carolina about my treatment, or her recommendations, Friday.

But I've been taken to detox and, activated charcoal. Great, great. Is, each two times, two different times a day. Got it. Then the other thing we find repeatedly is that people who work with a coach, someone that can really help them.

And I think in your case, you're very fortunate to be married to someone who is really focused and really helped you and really worked with you, to get the best outcomes.

So in some ways, he's kind of been your brain health coach. The other thing I had done research that showed if someone had a reminder, they were more likely to do a behavior.

So I'd constantly post reminders, around the house, whether it's my mirror in front of my bathroom or a note on my frigerator, or putting a supplement I need to take out in the middle the island of this new right, or if I have that behavior I really don't want to do.

A physician order, made to soak in hot sitz baths. And, it's really fun once I do it, but it's hard to make myself do it. So. Yeah. So I put a little star on my calendar after I do it.

Yeah. You know, any way you can one remind yourself of the new behavior or to reward yourself when you do it. Yeah. And then the other thing I would say to the readers, part of what helps me, continue to work and optimize Alzheimer's is, I have a saying, kind of like a mantra, that, I can choose now, and if I have Alzheimer's, I won't have any chores.

I'll be doing what other people tell me to do. And, most people have been exposed to Alzheimer's patients, and, that I have a torch. Comes from an Alzheimer's in nursing home who did not have a choice.

Because I needed to move, for example, from the dining room to the bedroom, but they didn't understand why. Right? So I would encourage your readers to figure out some mantra that motivates them.

Yeah. And see also that reversing Alzheimer's as a process, not at one stage event. Yeah. I mean, we've been telling people lately that, you know, we've now entered an era in which Alzheimer's is optional.

Very few people ever need to get this. If they get on appropriate prevention or very earliest reversals at the sky stage, you really don't have to allow yourself.

We shouldn't see people with Moca scores of zero, even though yes, we've seen some that will improve a little bit, but they don't get all the way back to normal yet.

We're we're still working on that, but we're not there yet. So if everyone were to do the right thing, we really could make this a very, very rare illness.

And I want to go back for a moment to the symptoms you had. And what's changed with those. So you wrote in a beautiful piece that you did for the first survivors of Alzheimer's.

You were having trouble making a gingerbread man, so you couldn't even complete a gingerbread man that you had done multiple times before. Of course, you, as you mentioned, you forgot to pick up your daughters.

You were having trouble with, hands on a clock and things like that. You were even having some tremors at the time. And just in general having problems with calculations.

You mentioned doing serial sevens and things like that. So you had both the amnestic and not Amnestic symptoms. Now, as I understand it, after you were, after you were treated for some time, you're able to do the gingerbread man again.

No problem. You're able to do clocks. No problem. You don't forget to pick up your granddaughters. You mentioned you occasionally get a name mixed up, but you.

But you get their names right most of the time. And they. I know when they were interviewed, they said, wow, you know, grandma is really sharp. Her memory is very, very good.

Now, they obviously had noticed a change in you and that they were concerned about and that's gone now. So you really have gotten rid of almost all of your symptoms.

With that occasional, as you said, a little bit of a no Mia that comes and goes depending on how things are going for you at the time. And as you can see with your continued look at mycotoxins, maybe there's a reason for that.

As you continue to detox and you you pointed out earlier, detoxing is the toughest part in general for this. And yet you've done very well with that. And many people have, even though it's the toughest part, it's not impossible.

And the good news is all the different things that contribute to cognitive decline, every single one of them can be addressed typically. So this is, absolutely fantastic.

And again, congratulations on this. The other thing I would say about as far as reversing eye symptoms, I actually was able to start scoring normal on the Montreal Cognitive Assessment and not forget critical things like you just did.

In fact, after I'd had to look at my notes, but I think it was after either six months or nine months. Basically when I got that type one inflammation down. Yep.

And I did that by eliminating gluten, eliminating sugar. Yeah. A lot of those symptoms cleared up. Yeah. And 6 to 9 months is a very typical time. You know, we usually tell people you might see changes in three months, but give it, you know, 6 to 9 months after you've done the right thing.

Of course, if it takes you six months to do the right thing, then give it another six months, six months after you've done the right thing. And again, you have to remember you had been having these changes in your brain, likely since 2000.

So you've got at that point, you know, 16 years of development, and yet you were able to see these remarkable changes within 6 to 9 months. Absolutely striking, and very, very exciting.

So, I know that you've with all the wonderful things you've done, one of the things you've gotten interested in telling jokes, and there's nothing makes me happier than someone who had a what would have been a terminal illness, who's now able to have a full life and able to make jokes and enjoy their lives with their grandchildren, with their husband and their families?

Is that all that is wonderful.

Recovery, Humor, and Closing Reflections

So you have a joke for us today? I do, I've got two. And you okay, you have one you want to share. Okay. And it was this little four year old boy who saw a pregnant woman for the first time ever.

Of course, he was shorter than the pregnant woman, so he touched a pregnant woman's stomach or abdomen or uterus and said, what's that? And the woman replied. This is my baby girl.

And I love her bunches and bunches. I just love holding her. And the little boy looked at her with great big eyes and said, if you love her so much, how come you ate her? Oh, that is what we would usually call a dad joke or a mom joke.

All right. And what's your other one? There was this, young couple who just got married, and the, husband happened to be a preacher, and he opened the bill to pay him every month.

Well, one month he opened the bill, and he said, honey, what is this? This is outrageous, bill from the nicest dress store in town. Why did you buy this?

And she went on to explain that a best friend would get married and so forth, and she just had to have the dress. And the husband said, it doesn't have to be a minister.

He said, why didn't you say, devil, get behind me? And she said, I did. And he said, whew, look, it even better. All right. Great. Well, so great to talk to you, Sally, and thank you again for your wonderful contribution to the first survivors of Alzheimer's and for your contribution to the world of people who either are at risk for cognitive decline or are already suffering cognitive decline.

They're hearing your story. They're understanding what you did. They're understanding that there's hope and that there's a tremendous amount that can be done and that you've got to keep tweaking, you got to keep sticking with it, and you've got to check the appropriate variables, which you've done repeatedly with the labs, etc..

You know, and all the things you've done to optimize things, I think is it's not only inspirational, but it's also therapeutic. It's telling people what they can do to get best outcomes.

So Sally, thank you so much for taking your time with us today. We really appreciate it and thank you. I'm so glad you did your research, and I've got some answers for those of us who need it. So thank you. Thank you.

And there's lots more to do. We're still working on it, but certainly, we're we're getting some wonderful results and we want to keep on optimizing.