CUTTING EDGE Health

[00:00:00] Female Presenter: Welcome to the Cutting Edge Health: Preventing Cognitive Decline podcast, where we're making 90 the new 40. I'm Jane Rogers. Buckle up for interviews with the world's brightest minds to help you live longer better. In Seattle, something exciting has been happening for three decades. The longest-running study of its kind with 5,000 participants called The Adult Changes in Thought Study, ACT for short.

It's a living laboratory on aging. Participants are all patients of Kaiser Permanente, so their intact medical records are a treasure trove. Twenty percent of participants have gone on to develop dementia, and so some Alzheimer's prevention breakthroughs have come out of this research. ACT was started by Dr. Eric Larson, a Harvard Medical School graduate, but he's now joined by researchers from all over the world.

[00:00:53] Jane Rogers: Dr. Larson, thank you very much for being with us today. I hope you're doing well.

[00:00:58] Dr. Eric Larson: I am.

[00:00:58] Jane: Good.

[00:00:59] Dr. Eric Larson: Got a good night's sleep. Got a big back ride this morning, so no complaints.

[00:01:04] Jane: That's great. You started into studying aging a long time ago. Three decades ago, almost four decades ago. Can you tell us about the process and what got you excited about this field of research?

[00:01:17] Dr. Eric Larson: Yes. That's something I like to talk about, and I think it tells a bit of a story about the evolution of how we got to where we are today. I moved out here from Boston, and after a fellowship and a chief residency at the University of Washington, a colleague invited me to start a clinic called the Geriatrics and Family Services Clinic. That was in 1978, and it was the first outpatient clinic for people and families who were concerned about whether they were becoming demented or how they might get help if they had dementia.

The thing that was unique about it was that it was outpatient and it was older people. I thought I really knew a lot; I'd just been through prestigious internal medicine training programs and was the chief resident at the major university hospital here. I said, "I need to bone up a little bit on this," so I read a lot of papers and textbooks. Then we started our clinic and as we started our clinic, I began to realize that what was in the textbooks was not what we were seeing.

The evidence that people used to tell us what to do and best practices just didn't really work. My colleagues and I started to keep notes and collected data, and our first sets of data were just a descriptive, but in the meantime, we were able to start a research

program. The thing that I've noted almost throughout my career is that when you do research in a community population that's not highly selected, and I'm a generalist, general internist, so I have this perspective of not just the brain, but everything else that goes along with life as we age.

We did this literally in the back pocket of our lab coat at first, then we got our first grant, I think it was in 1980. That was the start of all this. When we, at the University of Washington, got a grant for an Alzheimer's Disease Research Center in ADRC, I became the person who was supposed to develop the clinical core and we did, happily. Then I got to know some people around and I was on the office of technology assessments advisory panel on Alzheimer's disease.

That's just when the funding was starting to get really good in this field. In the process of doing that advisory work for the executive, and the Congress, and the HHS, we responded and got this idea of developing an Alzheimer's disease registry. The idea was to take what had been accomplished in cancer registries to understand the epidemiology and also the clinical course, and also as a source for research subjects. We said, “We can do that.”

We got a very good score on the grant and started the UW Group Health Alzheimer's Disease Research Center in an HMO with enumerated populations. We basically had a population-based research enterprise from the very get-go. We started out as a case-control study if people are interested in the epidemiology methods and realize that's not going to work. It's better to start with people who are not demented and do a cohort study. In 1994, we started our cohort study after a fairly successful run as a case-control study, and over the years we've continued to do that.

Often what we did at the first was discover that what others have discovered didn't pan out, so there was a lot of kind of that's frustrating. We're not finding anything new other than that others’ research wasn't accurate and didn't reproduce. Gradually, as the cohort experienced enough years to develop events that you could monitor, we began to do very productive line of research from these wonderful people at Group Health, now Kaiser, were willing to be in our study. See them every two years, people sign up for autopsy in advance.

After '94 to the present, almost 30 years now, we have an ongoing cohort study. The original cohort is very small. There were 2,581 people at first, and there's just a few that have lived throughout that, but because we have a population to sample from we can keep a cohort going. When somebody dies or drops out or becomes demented, we just replace them with another randomly selected person. Over the years that investment by the National Institute on Aging has blossomed to the point where we have the largest population-based brain bank, and as well as this, hundreds of thousands and maybe millions of bits of data on people.

Both from what we gather in our research funded by the National Institutes and others, and all the clinical information, the HMO or an integrated delivery system. People get 98, 99% of their care through their insurance plan, which is at Group Health, or now Kaiser. It's a treasure trove of data; we call it a living laboratory of aging. Over the years we've probably had scores of other studies that have used our material as a basis for their research, often as collaborators with my colleagues and me and others. Also, people realize that the NIA, that we got to beef this up.

As opposed to having a limit of $2 million dollars a year of funding for our five-year funding cycles, this current five-year funding cycle is the total of $56 million dollars for five years. A huge growth for us. In part, it's to build the infrastructure to do our own research and then enable the world to use this living laboratory of aging for their use. We have a big grant with the Allen Brain Institute here in Seattle to do proteomics and transcriptomics from their terrific eye-level biomathematics and genetic lab work.

Got a big study on the role of air pollution in dementia, and it just goes on and on. It's really, really exciting to be here in this stage in my career. I retired in July of 2022, but both seeing the benefits of what we've learned so far and then the future ahead of what we can learn. Fortunately, I'm able to stay somewhat involved as a part-time professor at the University of Washington.

[00:08:05] Jane: Oh, thank you for explaining all that background. That's really important that we understand where this study came from, how you built it, where it's going. We should say it's called ACT, Adult Changes in Thought study, and it's in King County, Seattle. You've got 5,000 people as your cohort all within Kaiser Permanente. You've got their medical records going back decades, and you're able to look at each one and 20% of them have gone on to get dementia. Haven't they, over the course of this?

[00:08:36] Dr. Eric Larson: Yes.

[00:08:37] Jane: You have this wonderful living lab of what happens. What are those parameters? How should we break this down, doctor? I know there are 12 different modifiable risk factors that we could talk about. What are some of the things before we get to that, that you are most excited about that have come out of ACT? I know exercise is a big thing. I know diabetes is a big thing that you've realized, that you told the world about because you watch these seniors.

[00:09:03] Dr. Eric Larson: Yes. There are a bunch of individual findings, but what these individual findings did was lead to my and others' involvements in trying to come up with what we know now about prevention. That's where the 12 reversible or potentially reversible phenomena, if you want to call it that, are supported by the best evidence. As of today, we can take the Lancet Commission and say, let's build policies, let's build care. Let's build research around things like physical activity, controlling blood pressure, diabetes, addressing hearing loss.

We've just completed some work that suggests that vision is an important mediator of Alzheimer's risk. The important thing about that is to realize that while this disease and these conditions of dementia and Alzheimer's disease are increasingly common as we get older, rather than saying we have to die young to avoid high risk of Alzheimer's. We can live through with the knowledge that you can take these risks and turn them into benefits. The very interesting thing about this to me and in terms of the 12 factors is there's nothing controversial.

A lot of the things that reduce the risk of dementia and Alzheimer's disease are the things that improve health and well-being in older people. From a public health perspective, we have a roadmap to work from, and for an individual practitioner, when somebody asked me, "What can I do to stop dementia?" One of my wife's law partners called me and said, "I don't have dementia. I don't have bad cognitive impairment, I have mild." I can't remember the term he used, but they told him, "Don't worry." Dave asked me, "What should I do?"

I said, "Walk an hour every day." He started doing that and he feels a lot better and it's helping his health and well-being. That comes from our early research that not exercising regularly is a very strong risk factor. The other thing that I think is exciting, because it's important, I think, to realize that there is no inevitability about this condition. There's not even an inevitability that as societies become older that we're automatically going to have a lot more people with dementia.

While it's true that as societies become older, and I'm part of that group, we should worry about becoming demented, and all the public health and personal health issues. Some of our research and this is with people around the world has shown that there's a good reason to think that in advanced countries like the US, United Kingdom, Denmark, Amsterdam, the rates of dementia are coming down.

[00:12:02] Jane: Significantly.

[00:12:02] Dr. Eric Larson: The important thing there is that this directly relates to higher levels of education. Again, one of our early findings in the ACT study, higher levels of reduction of cardiovascular risk, which have occurred as people quit smoking and took better care of their high blood pressure, and better socio-economic well-being. As the 20th century went forward along with better education, by and large, it wasn't a straight uphill line, but people were better off in the advanced world.

What's even more interesting to me, and this has nothing to do with the ACT study, other than I'm interested in. If you go to countries which are rapidly industrializing and adopting some of the less good aspects of a Western lifestyle, you find the rates are going up. The message here is that this is a reversible trend that can be modulated as opposed to a huge line upward, more gradual increase in the risk of dementia as we get older.

[00:13:11] Jane: I was reading the numbers, there's a 1/3 drop from 2000 to 2016 in the rates of dementia in North America and Europe. That speaks to exactly what you were talking about. We have reached a point where people are better educated, socio and economic indicators have improved. We're not doing the same stuff our parents were doing as far as health. We realize we need to exercise, and not smoke, and not drink a bunch of alcohol. We need to get hearing aids. The number one thing between 45 and 65 to prevent dementia is to get a hearing aid if you need it.

[00:13:44] Dr. Eric Larson: I wrote a book called *Enlightened Aging*, and a lot of the material that I wrote were from the subjects in the study. My parents, my mom and dad, lived into their 90s and I would ask them, "Did you ever expect to live this long, or how old did your parents live to be?" It was always, "No, I didn't expect to live this long." My parents were younger than I am when they died. This whole generational change has happened.

Unfortunately over the course of our lives, and to some extent our parents' lives in my case, life got better. Medical care got better, and people were living longer, and often people would say, "If I'd known I was going to live this long, I would have lived differently." I think that was probably Mickey Mantle that said that at some point. Now we know that you can do something different that will very likely make your life better when you're 75, 80, 85, 90, and beyond.

[00:14:47] Jane: I like the story that you tell of the 101-year-old woman who flew down to Argentina so she could be in a tango contest. 101, and she lived till she was 108. These are all part of your patients, part of your 5,000-member cohort. They've added a lot to your life, haven't they? Probably a lot to your retirement that you look at them and how they aged.

[00:15:07] Dr. Eric Larson: Yes, I think that's why I'm having a hard time to retire because it's so interesting. It's a privilege to be able to both get to know a person's character, 101-year-old character. Do you want me to tell the story for the podcast?

[00:15:21] Jane: Okay. Yes, it's a great story.

[00:15:24] Dr. Eric Larson: Back in about '90s maybe, we published our paper on exercise as a way to reduce your risk factors for dementia. The newspaper got really interested in this finding. I called our staff and said, "We have anybody who might like to be interviewed on camera?" One of our longtime staff said, "Well, we should use this person, she's 101 years old, and she's just a pistol." We called her, and I introduced myself. I only see people when they become at risk or look like they might be demented and she said, "Yes, I'd love to do this, but you have to do it right away, today."

[00:16:04] Jane: Oh, today?

[00:16:05] Dr. Eric Larson: Of course, none of the cameramen were ready. I said, "Well, why? Why today? Can't you wait a couple of days and we get ready?" "No, it's got to be today because tomorrow I'm going to Argentina." She was going to Argentina for a tanglo fest with her 70-some-year-old daughter, or maybe two daughters. She went down there, and when she came in for her TV show, she had her dancing shoes.

That's almost like red shoes that are in *The Wizard of OZ***,** and she's very short like five feet or less, and amazing. She danced for the camera, she went down to Argentina, she was the belle of the ball. All the gauchos wanted to dance with her rather than her young daughters.

[00:16:50] Jane: That's a beautiful story.

[00:16:50] Dr. Eric Larson: She had built up physical and psychological resilience to the things that happen as we age. She'd been a social worker at Hull House in Chicago before she moved to Seattle, and her husband, when they retired, were going to go to India to work. They got to India and in a month, he died of infectious disease. Of course, she had to bring him back to their home in Illinois.

Rather than say I'm done, she picked herself up and went right back to India and finished her two years with Peace Corps, and is one of their very well-known Peace Corps volunteers. When she started to lose her vision, and she went to books on tape. When she started to need to live in an adult home, she decided to create a social world for herself and others. They had a breakfast table, and you could sit at her breakfast table if you came with a joke.

[00:17:48] Jane: Oh, that's fabulous.

[00:17:50] Dr. Eric Larson: She built up this resilience of taking good care of her health, taking good care of her social life. Her ability to bounce back, be resilient to setbacks when they happened, it's an amazing story.

[00:18:04] Jane: I was reading in some of your material in preparation for this interview, that building that emotional resilience, physical resilience is very important as we age. Because aging is not for sissies, they say, and we need to have a resilience. Did you find that in the 5,000 people you studied that those who are resilient, those who woke up saying, "You know what? I want to feel like I'm 35." They had the right mental outlook, they did better?

[00:18:33] Dr. Eric Larson: We didn't do any formal research with the instruments that you'd use to answer that question. I can tell you anecdotally, it's really, really, really true and the stories abound in terms of anecdotes. The one that I remember off and on is a woman I saw in her home near a place called the **[unintelligible 00:18:54]** here in Seattle. I don't recall exactly how old she was, but I'm sure she was in her 80s. She had

screened positive as if she were going to become demented. I saw her in her home, and she was one of these persons who you see sometimes whose spine was bent almost at a 90-degree angle.

[00:19:17] Jane: Oh, pain.

[00:19:18] Dr. Eric Larson: I don't know about pain. I don't actually think she was having much pain, but part of the exam is I test people's balance. If you can imagine a balance test when your back is bent almost 90 degrees.

[00:19:32] Jane: She couldn't do it.

[00:19:34] Dr. Eric Larson: Well, she could. That's the amazing thing.

[00:19:36] Jane: She could?

[00:19:37] Dr. Eric Larson: I said, "Ma'am, most 80-year-olds can't even do this when their back is normal. How did you maintain your balance?" Her answer, "I've been doing balance exercises." She built back to a better state than most people of her age, even with a disability because she took an activist role—

[00:20:00] Jane: Fabulous.

[00:20:01] Dr. Eric Larson: —in trying to keep as functional and as connected as possible. There are, I think, quite a lot of examples like that in the study. That is where we got a lot of the ideas for the book, how can you be enlightened and age with the knowledge that we've been developing over the decades.

[00:20:21] Jane: All the decades of research that you have done, your team has done. Now you brought people in from all over the world to study how we age. Are you of the mindset that dementia can be prevented, or do you feel the jury is still out?

[00:20:34] Dr. Eric Larson: Prevention is a hard word when it comes to chronic diseases. Let me explain. We can prevent polio with a vaccine and know that if the environmental conditions don't change, people will not get polio when they're vaccinated. With regard to chronic diseases, from cancer to heart disease, to dementia and Alzheimer's disease, what we call prevention is often reducing risk or delaying the onset until later in life. People say, in joking, "How do you prevent cancer? How do you prevent dementia? Die young because all these things happen as we get old.' People don't want to die young. They want to live.

[00:21:20] Jane: As your age.

[00:21:21] Dr. Eric Larson: I believe we can prevent dementia in the sense that we can and have reduced the risk. To say that I know how to prevent every person from ever getting dementia if they live to be 90 to 95, we can't say that. There's a lot of good evidence that a proactive program in how you live your life and also the medical care you get. The point that I try to emphasize, and this is where I think in some ways the field is, and the public are having trouble, let's put it that way, is we think there's some a magic bullet, a pill, but the closest thing to a magic bullet is exercise, maybe. The one pill that we take it or five pills like you do for trying to cure cancer we're not there and we may never be there. The reason I say that is from our research. When you look at the brains we now have, almost a thousand brains in our brain bank from the ACT study at the University of Washington in the Neuropath Department.

What you see is not just amyloid plaques, tau tangles, which are the two markers of Alzheimer's disease. You also see microvascular infarcts, undiagnosed infarcts that people have had in their brain. Infarcts means strokes. It's clear that you can parse out the amount of risk that comes from each of those factors, and none of them are 100%. You can also see people who aren't demented, whose brains look like they ought to be because they have so much plaque entangle in them. We call that resilience in the face of neuropathologic degeneration.

The idea that you can somehow have a single or even a slew of pills that are going to target all those age-related neurodegenerative changes, it's a fool's errand as far as I'm concerned. You can learn how they interact. We believe it's time to take a different approach to research and look at more than plaques and tangles or removing plaques and tangles. Look for the sources of resilience, how some people have the plaques and tangles and aren't demented, and also bring the new techniques, proteomics, and analytic techniques of how you can use big data.

We've got big data, as does a lot of people around the world now. That is a whole new area, whether that's going to be artificial intelligence, or just people exploiting their curiosity to see what they can find by going into these areas of advanced analysis. Again, I think as we understand this better, from especially new areas of research will be better off. I would love to live for 10, 15, or more years, so I can be around and see what's going to be discovered.

[00:24:24] Jane: It's a very exciting time. I bet in many ways it's been frustrating for you because when you started this in the 1970s, I think all of us thought we'd have a cure for Alzheimer's by now. All of us are still struggling to get to the root, to get to the bottom. I know you spent your whole life trying to get to the bottom, and I can understand why you want to live 10 or 15 more years to say, "What are we going to discover next? What stone haven't we turned yet that's going to help change the tide on this for so many families?"

[00:24:55] Dr. Eric Larson: I practiced in this area for up until the pandemic, really, so many decades. What I've come to appreciate is doctors and families and patients, they want hope. It's not very helpful to be told, "Oh, you've got Alzheimer's disease, and there's nothing we can do for you," which was the case 30 years or years ago. I think that message of hope needs to be moderated by realism, that we've worked on some of these things forever.

Spending 26 or 75,000 dollars a year for some of these treatments, thinking that they're going to be worth it, safe, effective when we don't know they are. This need for hope is so deeply embedded in our psyche, whether we're the doctor. When I started out, I was prescribing drugs that they're safe, but they didn't do anything. They didn't do any good. There's a drug called hydrogin, which seemed to be the flavor of the decade back when I was starting. I would offer people hydrogin and there was some research that said, "Yes, hydrogin helps."

Fifteen years later, better research said hydrogin doesn't do anything, so don't bother. Is that a disappointment? Not for me, really, because I'm curious, and I love to know things that I didn't know. That's what research is all about. If you can do it yourself and with your teams, that's even more fun. I wish we'd made more progress, in part because our parents have suffered from these conditions as they lived. We don't want to accept the notion that there's no hope.

I think one of the things that I've been pretty pleased with in my career has been working with the Commission for the Lancet and also the National Academy of Medicine and formerly the Institute of Medicine, has had these groups that have come together with, "How do we improve the care of people with dementia?" There now is good evidence based there too that there are programs which you can put in place, which makes the life of the person with dementia and the caregiver or caregivers better off because they've been tested and developed and they work.

Preventing dementia, they're not perfect. Because we used to say, "You've seen one person with dementia," meant highly heterogeneous condition to live with and to treat. Again, I'm really pleased that we know how to educate people around what are the behaviors that are troublesome in dementia, educate caregivers about how do you respond when somebody repeats themselves over and over and over again. Or when somebody says something that's obviously not true, we know you really don't want to try to confront them with your version of reality.

That only ups the anxiety and ups the risk that somebody is going to become hostile. When you train caregivers to understand the disease and understand ways to deal with things that are not pleasant, you're both better off because you haven't amped up the response of the victim, if you want to call it that. You also haven't created a situation that is going to frustrate the caregiver.

[00:28:41] Jane: I could talk to you for two hours. I find what you have dedicated your life to fascinating, just fascinating. I was very excited to see that you won the grant for $56 million over five years that will allow ACT to better survey racially and ethnically diverse groups, even more so than you have in the past couple of decades. Because there are certain segments of our society that certainly suffer from Alzheimer's but are not being studied at the rate that they should. I'm thinking Blacks and Hispanics. This will enable you to study that population better, won't it, and help more families?

[00:29:19] Dr. Eric Larson: Also contribute to the knowledge. I'm thinking about this as Alzheimer's disease and related dementias. Also, we need to know this general phenomenon of aging in all members of our population in the United States. Not just people that come to clinics, but you can do with a population-based study. You can understand, for example, racial and underrepresented minorities can be systematically excluded from research or maybe suspicious of being in a research program where most of the staff are Caucasian and privilege.

It takes an extra special effort to change the way you do things to improve your representativeness, if you will. We're in the process of doing that. I think we've always done that, but we haven't done as good a job as we should have done and my hope is that over time we will. I think in my own personal opinion, and not everybody agrees with this is, rather than only studying one group, you study all members of all groups from the general population. We know that socioeconomic privilege and status has a huge impact on every chronic condition.

Even infant mortality over time, I think, if we can expand our research population, we'll end up with a much better knowledge of these socioeconomic factors. One of the things I worked on with the Institute of Medicine was this, it was called something like the Social and Psychological Factors in Health, I think was the title. It was eye-opening to read how much we have observed over the years in our country and elsewhere that SES and the factors that people are exposed to as they go through the life course are so important.

They're so important for us in the ACT study. Even though we've done what we call life coursework before, we have a separate core, which is called the LifeCourse core. We're able to collect data all the way back to when people were born with addresses and the other thing. We will fill in the blanks of what a person's life course was like and use that data to better understand how well they aged, and in particular, of course, how that affects their risk of Alzheimer's disease or cognitive decline as you get into the 70s, 80s, and 90s. I'm glad you used that word because I think it is exciting.

[00:32:08] Jane: That's exciting. Very exciting. One of your colleagues at the University of Washington, we've had the honor of having on this podcast. His name is Dr. Matt Kaeberlein, and he has started something called the Dog Aging Project.

[00:32:24] Dr. Eric Larson: Worms to dog, it's true.

[00:32:26] Jane: Worms to dogs. You know about the Dog Aging Project. It's very interesting. He's taken 400 dogs. What he is espousing is that there's a drug called rapamycin that helps to slow aging in the dogs. If you use that with people, if you can slow aging, then you can slow the diseases of aging like Alzheimer's, like cancer, like heart disease. I know this is the early stages for this and Dr. Kaeberlein's research, but he's very optimistic. A lot of people seem to be following this path as one of the ways to slow aging and prevent age-related disease. Having studied all these people, these 5,000 people in Seattle, what are your thoughts on rapamycin as far as slowing aging?

[00:33:10] Dr. Eric Larson: It's intriguing for starters, and it came from a model that has, I think, scientific validity. It's not preposterous and I think it's an area that we just need to explore and see if there's an answer that is going to be beneficial to people. I don't want to say it won't work, I don't want to say it's a dumb idea. I'm always suspicious of the magic bullet theory, idea that we're going to find one thing. What we might find is that rapamycin does have an effect and we can understand if the effect is beneficial, how it works in our bodies, that it might slow aging.

We know there are things about our genetic makeup that renders us relatively less likely to age rapidly or to develop Alzheimer's disease. We don't know the mechanism, how that works. Ultimately, that's the same question that we're going to end up with rapamycin. There's a postulate that seems like it works, and here's why it seems like it works. If it does work, how does it work? Mechanism to me, neuroscience today is so interesting because we will be learning mechanisms over the short term with a project like Matt's because he's getting funding, he got his dogs.

People are already talking about, if this, then that, when it comes to dogs to humans. Dogs are nice because so much research over the years has gone from research in Petri dishes with specimens to research in mice and rats. One of my colleagues who's really, really smart, basically he says, "All the things I've seen that worked with mice and rats, don't translate into humans. Dogs are closer to humans than mice and rats." The fact that Matt is working in his lab or working with dogs is I think really, really valuable.

[00:35:18] Jane: One last question before we go. Tell me about your own life. You just retired a year ago, you know all this stuff about how to live a good retirement, how to keep your mind sharp. Can you share some of the things you're doing maybe every day or at least once a week?

[00:35:31] Dr. Eric Larson: Yes. I thought a lot about this lately. I wrote a column for a magazine called *3rd Act*, and I also was at my 50th medical school reunion a couple months ago. I was able to see this amazing group of people, all graduates with me 50 years ago at Harvard Medical School. They're all 75, 77. It was amazing to me how many of them were doing really well and relatively few had actually died.

I'm starting to think this through and there's the obvious, I exercise every day. I try to keep my weight as stable as I can, and I'm actually trying to lose a few pounds to make my muscles have less to lift when I stand up. I don't smoke. I have a lot of hobbies, gardener, I raise chickens. I have 12 grandchildren with my wife. We have a rich source of family to be with, and we're fortunate enough to travel and engage our minds. We pretty much read every day since I have more time.

I started during the pandemic actually. I was a pretty good pianist when I was younger, and when I got into Seattle I just didn't have time to pursue that. I'm taking piano lessons, I practice every day. I try to be busy, and I try to be learning new things. I try not to get frustrated. You saw me frustrated earlier today when I couldn't master technology.

[00:37:00] Jane: No, you weren't. We should say we had technical issues before this, but you didn't get frustrated. I was impressed.

[00:37:06] Dr. Eric Larson: Oh, inside I was frustrated. I didn't share it with you probably though, which is good, I guess.

[00:37:12] Jane: You're not going to head to Argentina and do tango?

[00:34:16] Dr. Eric Larson: We were going to go once but we had an illness in the family, but we went last week to the highest mountain lodge in British Columbia, Cathedral Lakes, and we hiked. It's all uphill and then of course downhill. I don't know that I would be like the tango dancer. First of all, you got to live to be 100.

[00:37:37] Jane: You will.

[00:37:38] Dr. Eric Larson: We love being active and adventure to the extent that is within our capacity. I fell going up a very, very steep scramble up a cliff. As soon as you have something like that happen to you, you think, "Oh my gosh, I got to be more careful." I wrote a column called “Slow Down, You Move Too Fast” before this *3rd Act* a while back. That's advice that I have to take, I don't want to move too fast and take the risk of falling and injuring myself.

In my book, I talk about what's advice you have on falls, don't. Because as you get older, you don't want to break your hip and so forth. That's a roundabout way of answering you your last question. That I use what I've learned and what I've observed from living life. Of course the research, we did a lot of research on falls reduce the risk of falls. I will add that my relationship with my wife and our children and grandchildren is front and center.

I've always had a spiritual life, but I think more so as I've gotten older, I've been attending the same church since 1980. At first when I had so many other things going, it was nearly as important, but as people in my life began to die or get sick and we have our own

setbacks, I think a spiritual life and a strong faith helps many people. It certainly has helped me.

[00:39:08] Jane: Dr. Eric Larson, as true pleasure spending time with you. Thank you.

[00:34:13] Dr. Eric Larson: Likewise. Thank you.

[00:39:17] Presenter: 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.

[music]

[END OF AUDIO]

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.