Introduction to C15 and Healthy Aging

Welcome everyone. Today's conversation is one that completely challenges what many of us have been taught about fat, about aging, about long term health.

Because so many women entering menopause, Perry menopause are noticing changes in their bodies that feel rapid, accelerated, low energy, increased inflammation, slower recovery, worsening metabolic health, changes in skin, joints, brain function.

And really, if we're being honest, a growing fear around aging and longevity. And for decades, women were told that saturated fat was something to fear and avoid at all costs.

But what if the message was incomplete? My guest today is Doctor Stephanie Venn-Watson, a veterinary epidemiologist and one of the world's leading experts on probably one of the most fascinating nutrients I've ever heard of.

It's called C15, and it's now being recognized as the first essential fatty acid discovered in more than 90 years. And what makes this story so incredible is that her discovery came from studying Navy dolphins right here in San Diego, where I live, and she was trying to understand why some dolphins aged healthier than others.

And since then, over 100 peer reviewed studies have explored the role of C15 in supporting in humans metabolic health, mitochondrial function, inflammation, balance, cellular resistance, heart health, liver health, healthy aging.

So we're going to talk today about something called fair Optus as well. And that's a newly recognized form of cell death that's actually linked to aging and cellular fragility.

And we're going to learn why deficiencies in this nutrient may be affecting far more people than we realize. So Doctor Stephanie Venn-Watson, welcome to the conversation, Laura.

Great to be here. Excited to excited to dive in. I know I can't wait now. We had you in my community last year and I and I'm telling you, everybody was leaning in on your every word last time you spoke to us.

So I'm really excited because you even have more newer information than the last time we talked. Because like I mentioned, the studies on this are just rampant.

They're just going and going and going. So you've got more more information for us than last time. But first, let's start at the beginning. I mentioned that you started this with the San Diego Navy Dolphins.

So that led to your discovery of C15. And, you know, for women in perimenopause and menopause who are becoming more concerned about healthy aging, energy, inflammation, longevity.

Why is this discovery so important? And tell us a little bit about how you did it. I think that the best part of the story everybody likes to get. Not another dolphin store or Gene story, right?

Flipper, flipper the only one. So yeah. So I everybody so yeah I'm Steph, Laura shared veterinary epidemiologist I worked for CDC, World Health Organization and helped to set up infectious disease surveillance systems all over the world, which was amazing.

And then 24 years ago, Time Keeps, Farson was recruited by the Navy to help continually to lead a program to continually improve the health and welfare of Navy dolphins.

Right. And a lot of people are like, what are you? Maybe dolphins? Maybe has cared for the sustained population of about 100 bottlenose dolphins for over 60 years. Wow.

They live out or, you know, San Diego Bay well. So they live out in San Diego Bay, go out into the open ocean every day, every day they choose to come back.

So it's really big and amazing. Used to come back. It's so amazing. They let them loose and they come back and they let them.

How Navy Dolphins Led to the Discovery

It was like they come back. When it was my I remember my first day that like, I don't know how I'm going to feel about dolphins and the, the Navy and first day there and saw how wonderful the environment is.

That whole choice that dolphins make to come back every day tells you so much about the program, in addition to the fact that they live a long time. So dolphins in the wild live to about 20 dolphins at the Navy, routinely living into the 40s and 50s.

I was probably new information from before. Laura, like two dolphins this past year turned 60 years old. Yeah. My gosh. The Navy's doing important conservation work.

Look at that. They ask is exactly so. While so I was brought in initially to look at infectious diseases, but because they were there population of of older dolphins was increasing myself to rapidly turn into looking at the welfare of older dolphins.

And that's where we found that about 1 in 3 older dolphins were developing the syndrome that was very similar to us as we age of chronic inflammation, insulin resistance, high cholesterol, fatty liver disease, even the full suite of changes consistent with Alzheimer's.

And so we then all this work was funded by Office of Naval Research. And then we used this technology called metabolomics to look at hundreds of small molecules present in the dolphins blood and their all fish diet.

And we wanted to see which small molecules predicted the healthiest aging dolphins. And that's where C15 was discovered as the top dietary predictor of the healthiest aging dolphins.

I'd like you shared. Fast forward over 100 peer reviewed studies ten years later, and now C15 this gift that the Dolphins discovery that they gave us, now emerging as the first essential fatty acid, healthy aging fatty acid to be discovered in over 90 years since omega.

Wow, it's so remarkable. I love this story so much. You cannot fall in love with with this, with this molecule because the story is so good. I wish every nutrient had a story like that.

But tell me link, link it up for our listeners right now. How why is this relevant and important to people in in mid middle life. Right. So so menopause period pause.

And honestly for for all the ladies listening even the men. Right. So they're so their spouses and their brothers and their dads and all the people that could benefit from this, this this is a female molecule that we're talking about.

But what is the why is this so important in midlife. Right. Exactly. And so and as a 54 year old, I've greatly appreciated this journey of discovery. So I've been able to benefit from the discoveries in midlife and beyond, which has been great.

So it's it's essential throughout our whole lives. And we'll talk about how it's so essential that it can actually accelerate aging among younger people to kind of match where, where we are at when we're in midlife.

But the reason why it's so important is it's a it does a lot of things. So C15 has it's called a pleiotropic molecule, which means it has a lot of beneficial activities.

But one of the core ones is it is a stable fatty acid that goes into our cell membranes. Right. We're made of cells. So everything in our body starts with the cell.

Every cell is protected by a cell membrane. And so C15 is a stable fatty acid. It goes into our cell membranes and it armors it. It protects it or makes it more resistant against what's called lipid peroxidation attack by oxygen.

And by doing that, it literally protects our cells against age related breakdown. And that really starts heading in and growing from that midlife on, when we start feeling those pain points of aging, a major driver of those aging related that aging can relate to this pain points of aging are due to lipid peroxidation and increase fragile cells, inflammation, all those hallmarks of aging that come with, you know, with broken cells.

I just want to share right now for my audience listening, who's used to working with me in programs. So, you know, we run a lot of organic acid tests on on our community.

And so for those of you who know there is a marker on your organic acids test called a lipid peroxidase, and that is exactly what she's talking about.

And that is one of those markers of oxidative stress in the body that is breaking down the cell membrane. And this is precisely what she's talking about.

So when you get done listening to this interview, make sure you go pick up your organic acid test results and look for that lipid peroxidation number.

Great. Call out. Great. Yeah, we got to make it practical. Like so many people here listening are pretty advanced. And they know like, oh, I've done that test.

There's and even your C15 level is on your organic acids. But in terms of why this is so important, you know, particularly for, for our bodies at this time in our life, can you link a bit about, you know, liver, heart, red blood cell health? Why?

In addition to cell membrane, why else might this be important to us. Right. So it does like it does a lot of things. So if we start with just stabilization of ourselves, this translates into this is where the conversation will come in which I'll bring it in a second.

But before we get there, C15 has been tested across a lot of different systems, so we know that it has it lowers over 18 pro-inflammatory cytokines. Wow.

So these are the like including IL six, Taff alpha MCP one like some of these pro-inflammatory cytokines that are main major drivers for aging that directly influence our heart health, our vessels, our metabolism.

Can you clarify something for our audience? Because I think one of the first times that the general population learned about cytokines was during the Covid cytokine storm.

Why C15 Matters for Midlife Health

And so what I'd love for you to explain is that cytokines are not unique to Covid, that there's frequently cytokines occurring in your body that are independent of having that viral infection.

Could you talk about that a little bit so they can link the connect the dots. That's a great call out. So right we heard about these cytokine storms. And this was an explosion I first get the infection in the lung hit one hit two.

Major response by our body right over response by our body. These pro-inflammatory cytokines that then just

exploded and then created a cause of death for a lot of people.

This is to your point, Laura, that this is not specific just to Covid, that when we look at aging as we get older is called inflammation is the term. So inflammation, chronic, low level, low lying inflammation that occurs throughout our entire body.

So it's systemic and it increases with age and in and of itself increases aging. So it becomes the snowball effect. And so these pro-inflammatory cytokines they're meant to be released to respond to and infection.

But what happens is as we get older, as we have this lipid peroxidation happening that triggers and brings out these pro-inflammatory cytokines that then put out this signal to the entire body, to your heart, to your liver, to your brain inappropriately saying inflammatory response, you know, inflammation respond, respond, respond, respond.

And it's just ever ongoing. And so the fact that C15 calms many of these multiple pro-inflammatory cytokines, it helps to take that edge off of a major driver of inflammation and aging.

Separate from that, stabilizing the cell membranes. We also. Know in all the time not just when we're sick. Yeah, exactly. Exactly. It's like, let's just keep our most of the time, as we get older, we have to keep our immune system calm, right?

To to stay healthy. And C15 also activates Ampk, which is a major regulator of our glucose metabolism and of our insulin health. It's how metformin who's the first line drug for type two diabetes?

That's how metformin works, is it activates Ampk. It's also at the heart of the longevity pathway. It's like a wonderful mechanism that helps to ensure that we respond to glucose appropriately and helps to fight insulin resistance and support insulin sensitivity.

It also inhibits mTOR, which is another longevity enhancing mechanism. It's how rapid Meissen works. So C15 has all many of these benefits that have these direct benefits to throughout our body, including especially our brain, our heart or liver, our immune system.

And as we'll talk about our red blood cell health as well. And since your discovery of this molecule, like we mentioned, over 100 peer reviewed articles have been published.

And it's in these very topics that you just that you just mentioned all these areas of the body. Yeah. So, so this is this is very meaningful work. You know, what comes up for me while we're talking about this is you mentioned that this is what was missing for the Dolphins.

They needed this to for longevity to live longer. So I'm assuming that this is part of their regimen. Now these navy dolphins receive C15 every day. Where would these dolphins have have gotten this naturally in the environment?

Why was it missing for these dolphins and then that apply that to humans. How do we get this naturally. Yeah yeah. Great question. So the for the dolphins up until the late 1990s they were the largest part of their diet were called Yukon fish.

And so these are super fatty fish. And they're so fatty that you could dry them out and stick awaken them and use them as camp. So they were called candle fish.

What really cool kind of story behind the unicorn fish off of the West Coast. And they became so popular. Unfortunately they got overfished, fished, so the Yukon fishery died out.

And as a result, the main fish source for the dolphins, for the navy dolphins was gone. So they then replaced those Yukon with five different types of fish.

So they decide let's provide them a more diverse diet with different types of fish. It ends up that three out of five of

those fish types, unbeknownst to the Navy, had no C15 in it.

Well, we didn't even know to pay attention to see 50 time, right? So I just can't even imagine how you figured this out. I can't even imagine that this is the epidemiologist in you, where you're going through reams of show me what you used to be feeding them.

What is happening? It's just see it. I just I had the best job in the world. Like, I love, love ever since I was a kid. Love, like, looking for patterns and looking for, like, I can't ride a bike or swim, Laura.

But ask me to find a pattern I can do. I'm okay with that. So. So they're getting these five kinds of fish, and three of the fish don't even have C15 in it.

Yeah, yeah. So then so that then by, you know, by just the intent that we have these three out of five of the fish hat didn't have C15 in them and different dolphins, eight different types of fish.

So some dolphins preferred something like, you know, we some of these we call the cable and we now call chips of the sea because we have no C15 in them.

And we had some dolphins that just loved all they wanted to eat were the Cape one. So we were then so, so because of that we had a population, a natural patient population where some were were they're being fed different diets, but in a much cleaner way than humans.

Right. We have so much diverse diets. This was much better control controlled. Yeah. Yeah. Exactly. And we were able to see like okay. So for the Dolphins that received this type of fish versus this, this dictated the more C15 they had in their diet, the higher their C15 levels.

And it divided the population into dolphins that had higher versus low C15 levels. But at this point, did you even know C15 existed? I'm seeing you were looking at like, okay, this diet versus this diet now, now what's special about these fish?

So now you're dissecting these fish at the molecular level trying to figure out what's in them. Why. What are they made of. What do they have that other fish don't have.

That's exactly. This is before AI. It's before AI. Right. It's. This is human brain figuring this out. This is remarkable. Truly. So where do our humans get this molecule from?

How can we get it from food? Where is it normally occurring? And what's happened to our diet that we don't get it. Yeah that you're on it. So. So while we can get some C15 from fish, it's mainly in the skin and the heads of fish.

So you want that. So cultures have skin in heads. That's it actually ends up being the same cultures that don't eat a lot of dairy. So that kind of worked out worked out.

They make something like hot fish, hot dogs. It's like parts as part like you could know. Skin and heads. And we got our. Skin in heads that tastes good like yuck.

So but for for the most specialty Western populations are primary dietary source by far Laura of C15 is dairy fat and sheep. Goats matter. It doesn't matter.

It does matter what they eat. So if a cow, sheep or go is fed is fed grass, they have 50% higher C15 in their milk than if they're fed corn.

Dairy Fat, Diet, and C15 Sources

So and even different seasons. So depending upon the season, milk will have a different amount of C15 level if it's in the summer versus the winter. So but our primary source by far dairy fat, it is such a reliable source for C15 that

for a long time, C15 has been used by nutritionists as a biomarker of how much dairy fat we ate.

We didn't know that. We didn't know to care that C15 was active as a biological helpful molecule. We just knew that your C15 levels were directly reflected by how much dairy fat you ate. And then, of course, what happened?

1977 Congress came out with dietary recommendations and they said, thou shalt not eat a high fat dairy. Avoid all dietary saturated fat, secluded, this odd chain saturated fatty acid.

And we went through in parallel with the dolphins, really a 50 year experiment of taking C15 out of our diet and now seeing the emergence of, you know, what is now coming through as a nutritional deficiency syndrome, both in the dolphins and in humans, and a.

Tidal wave, a tidal wave of metabolic disorders. Yeah. I mean, for the first time in history, our lifespan is not as long. And we have more chronic diseases, we have more diabetes, we have more heart disease, we have more cancer, we have more everything.

And this is just one. When you look at the whole puzzle of what is creating this problem, this is a piece of it, right? This is one of the puzzle pieces.

It's fascinating. So, so I know that, you know, I'm a I'm a gut health expert. And Cowdery man, it shreds most people's guts, including mine. We have a hard time with the case in in cow dairy and then just the processing of dairy products.

And so I don't eat cow dairy almost with, with the exception of grass fed butter. That's my only dairy every. And then I eat sheep and goat. But I don't think most women in menopause or midlife, or even men in midlife, or eating as much dairy as they need to get this molecule.

Yeah. It's hard. I paid $10 for a little whack of grass fed goat feta the other day at Jimbo's. It was ten bucks. Like, who's going to buy that and eat like, what are you going to eat?

Like $5 of cheese every day? It's hard. It's really hard to do that. And so yeah. So we and and with dairy fat you know it's we think that kids we think that we can help fix some of the deficiency syndrome component.

Like if kids can tolerate whole fat milk, they probably need to get back to to whole fat milk. But we need and we need to let that, you know, the science and play out in all of those components.

But as like throughout our entire lives, eating dairy fat. And I don't shy away from dairy that I eat, especially my cheeses. Love my cheeses. But yeah, dairy fat, if you look at it, has over 400 fatty acids in it.

Only 1% of dairy fat has C15 there. There are over 40%. Are these pro-inflammatory even chain saturated fatty 16 to 18. So when you look at studies where they get like an obese mouse C15, you see lower insulin, lower glucose, lower cholesterol, lower inflammation, you give it a dairy fat and it gets worse.

It has higher fat and liver. It's pro-inflammatory. And what these studies have shown is that it's the C16, this even chain saturated fat that is driving these.

So yeah. So you see these same things large prospective cohort meta analyzes of people higher C15 lower risk of developing type two diabetes cardiovascular disease higher C16 the opposite higher risk of developing.

So if I'm reading between the lines, are you potentially saying yeah, eat your grass fed cheese and dairy, but know that you're going to get a benefit and you're also going to get a downside to it.

So are we canceling out the benefit? I mean. There's that that literal phrase was used by Thorndike at all. There was a group of dietitians and experts in nutrition got together in Denmark specifically to talk about the whole food matrix of dairy, because in most cases, whole eating the whole food is the best way to get our diet.

But because of this conundrum, not just about C15, but other nutrients in dairy that they got together to talk about the whole food matrix and what they landed on and what they ended with was that there are specific nutrients within dairy fat that are beneficial, more beneficial in isolation than in the whole fat matrix because of that competition.

And they literally canceling out where their benefits can get canceled out by this complex food matrix. And they said this was an one exception to the rule where beneficial, you know, ingredients within dairy fat and for us like C15 right does better and its own.

So you know for C15 supplementation it's truly meant to it's not meant to replace the diet. It's truly meant to be what supplements were initially intended for, which is to supplement our diet and right reliably maintain and achieve and maintain our healthiest and optimal levels of C15.

All right, so I know we're itching to talk about fair ptosis. So that's a form of cell death that's associated with rapid or accelerated aging and something called cellular fragility syndrome.

So for for our listeners in midlife who feel like their bodies are maybe becoming more fragile or inflamed and less resilient, how can this research and tell us all about it?

Because I know you're excited. This is the latest thing, right? How can this help explain what's happening at the cellular level? Right. So this is fascinating research that is truly coming to like where it will hopefully it'll become a word that that a lot of people are going to know because of the wealth of work that's being done around the world.

So in 2012, researchers at Columbia University published a paper in cell, and they shared they coined the term Veritas. And as you shared, Laura, this is an entirely new form of cell death.

So when we went to cell biology class, we learned the three ways apoptosis, necrosis and autophagy. That's how our cells I they discovered a fourth. So this is it's a pretty big deal right.

To discover a new way. Our cells were dying. And this is new to me I didn't know about this. And still until I started diving in for this interview. So yeah I'm excited.

Yeah. And and I didn't know it until about a couple of years ago. So so we're all we're all learning. So despite the fact that this is discovered in 2012.

So since then, since 2012, there have been over 20,000 peer reviewed papers published. Oh my gosh. Yes, I'm ferrets. And so the scientific world is now been obviously on it.

And so so the way Dixon et al described in their, in their hallmark paper was that ptosis is happens when fatty acids within our cell membranes are too fragile.

And that leads to increased lipid peroxidation that then mixes with this strange iron that's showing up within the cell. So when iron combines with lipid peroxidation, this leads to a massive production of reactive oxygen species that then attack or mitochondria kill all the mitochondria.

The cell dies. So it's like an entirely new. So when you look under the microscope, it's like a slightly thickened cell membrane. There's iron in the cell and the mitochondria are dead.

So this you know, so now we have 20,000 papers over a year ago is 10,000 papers. Just so you could say how quickly that science growing on. We know that it's basically accelerating our aging.

It is accelerating the onset and progression of type two diabetes, fatty liver disease, cognitive decline, skin aging like everything.

Ferroptosis, Iron Overload, and Cellular Fragility

Right. Meanwhile women are taking iron supplements. Right. And so so here's the thing on this. Everybody needs to go listen to the interview I did with Morley Robbins.

He's going to be on this menopause summit as well. And he's talking about and he's been he's been raising that flag and talking about the dangers of iron for over a decade.

And everybody thinks he's crazy. But here you just said there's over 20,000 peer reviewed articles, papers on this very thing. That is that is exactly.

And now it is so scary because it's like, again, this is not there's there's no invested biased group involved. Right? This is a this is the world is working and they're showing you can and you can go into your favorite search engine for peer reviewed literature.

And you can put in iron overload. You can put in for Optus with whatever disease you want. And you will see pages and pages of how we're understanding iron is overloading this from ptosis.

And iron overload is happening in our brain and our heart in our liver. And 2012, the exact same year we published this phenomenon in Dolphins. We just didn't know it had a name.

And we were we were finding iron deposition within, specifically within the results of the liver and saying this was a really distinct, distinct syndrome that was driving that.

Then we realized it could be fixed with C15. Fast forward 11 years. So in 2023. So then we described it, we did a diagram of it. We showed this is what was happening in dolphins.

So fast forward. So then we had 2012 happened right. So Dolphins and then for Optus got discovered 2023 A consensus statement was published in nature from a large group of experts in endocrinology in iron metabolism and cardiovascular health, a lot of others.

And they came out with a consensus statement just three years ago of what they termed metabolic hyper ferritin. And literally, Laura, their description of this disease was exactly what we had described in the dolphins, like down to iron deposition.

And they were low in C15, right. And they were low. And so so what they're showing is that now they're defining hyper. And a lot of health care practitioners are seeing abnormal ferritin.

It could be low ferritin it could be high ferritin. You can say I'm like you're saying you could have iron deficiency anemia. At the same time you have iron overload in the tissues.

And then so now this is coming full circle where what we were able to show in the dolphins was the path of physiology of of, of this metabolic hyper to where C15 if our C 15 levels are low, our red blood cell membranes become fragile.

Those fragile red blood cells then are engulfed by the copper cells of the liver. This leads to iron overload, and for this in the liver and the spillover effects to all of our organs.

So we know this is happening not just in dolphins but now definitively in people. So the big question is with with fatty liver disease, with metabolic hyper ferritin, all these terms that didn't even exist right before 1980.

And then all these new terms being created and now cellular fragility syndrome, it's all because for at least a substantial component of it, a phenotype C15 deficiency driving this whole path of physiology, that's that's fixable.

It was like. The exciting part. Yeah. And we're going to talk about how you know how to get C15 molecule. You mentioned you know we touched on it just a moment ago.

So for decades women were told to avoid saturated fat at all costs. Like I'm a I was born in 1972. I was a teenager in the 80s, you know, in my 20s, in the 90s.

And saturated fat was bad. Like, I can remember, like everything in the store said fat free. Everything was recommended fat free. So, you know, this was this is a big mistake, right?

Because we were told that it would protect heart health and maintain our weight. And, and these longstanding dietary recommendations have really kind of unintentionally contributed to widespread C15 deficiencies, particularly in women and people in midlife, in women entering menopause.

So do you want to say anything else about that? I mean, I'll give you a soapbox for a second if you want to get on it and just do a rant. I don't know, like you, you're free to do it.

Yeah. I think you made a really good point. It was not intentional. The tension was right at the time, right? But then what was wrong if you didn't go back to the nutritional guidelines like dietary guidelines for all Americans, right, which were put out by Congress in 1977, it was really driven because a bunch because older men were were men were increasingly dying from heart disease.

And that was very real, by the way. It was a very high amount. But then they and then so they showed higher saturated fats, equal to higher LDL cholesterol, which resulted in heart disease.

But when they made the recommendations, they said it is for all Americans, for children, for women, for, you know, for everybody. And they didn't know at the time differentiating that C15 actually helps to lower cholesterol.

There's a controlled clinical trial down in Singapore with women that had a high BMI fatty liver disease. They took 300mg of C15 supplementation and it lowered their LDL cholesterol.

So it's the apple. Are you listening to everybody. It will help. Is the opposite. And so so you know we didn't know it at the time. But there was a fascinating period where they when they put out the first recommendations, the first round of recommendations in 1977, they had it open to the medical community to comment, and the medical community commented, it was a huge document that said, we are not ready to make these recommendations across the entire population.

The science is not there even at this time. And there were five senators, I think, that were leading the the dietary recommendations. Three of them dropped out because of because of that feedback from the medical community.

So really these dietary guidelines that we all followed, I did the same thing, Laura. I went I remember when mom changed to like watery milk, blue milk.

Right. And I see that that this entire thing ended up being driven by just, you know, 2 to 3 senators and then, you know, the. Tragic thing that happened in our household.

So my family was always made everything from scratch, everything homemade. My mom would never even let us by, like Chips Ahoy cookies. I had to make chocolate chip cookies from scratch.

And I know the recipe like the recipes in my brain. I can make them without looking at the recipe because, I mean. But here's what happened. Tragically, we switched from butter to margarine because we were told that was better, right?

And we skipped and we switched from whole milk to skim milk because we were told that was better. Yeah, yeah. Here's, here's, here's my mom with three young kids with developing brains and developing nervous systems.

And and she did what her doctors told her to do. That's right. And even today, like, then when that, you know, and instead of things getting better, things got worse, right?

Diet type two diabetes got worse. Obesity got worries. And and then instead, you know, every the medical community like we doubled down in the 1990s and moved those recommendations to every mom who had a child who turned two years old got a piece of paper recommendations from the pediatrician saying, you need to take your two year old off of whole fat milk regardless.

So it's been. And now we know that the C15 that mom eats influences how much C15 is in her breast milk and how much C15 baby gets. And there's now prospective cohort studies following mother infant pairs, showing that the more C15 mom has when she's pregnant and when she's breastfeeding, the more baby got, the better that baby's body growth, the better their brain development and the better their cognitive function and literary skills.

Language skills up to ages three and six. Those are association. But the hallmark animal studies have been done showing that C15 directly has a true essential role in both body growth and development across three different animal models.

So it's just we need. But again, there are lots of bad, even chain pro-inflammatory saturated fats. So it wasn't that it was all wrong. But now that we do have this information, it's like we've got to you can't explain C15 away anymore.

So that was my soapbox. We've got a you know, talk. About and we're not going to eat fish heads and skin. It's just not going to happen. I just don't see that happening in the United States anytime.

And and also that special fish, what was it called again? It's kind of been fished out, right? Oh, yeah. Are you. Yeah. Yeah. So I want to talk about how to get fatty 15.

I know people want this and I want to want to I really want to point out your book. I mean, so when you came into our community. You know, last year we we had everybody at the book.

I still recommend the book when I'm writing notes, you know, when I'm reviewing labs and I'm writing notes to my clients, I tell them I put a link like, go get the book and go learn about this.

So this is the longevity nutrient. It tells the story about the dolphins and it tells all the story about the I bet, I bet this book is already you're ready to rewrite it, right?

You're ready to write another one because of all the research that's come out, is there? Yeah, we.

Menopause, Resilience, and Practical Use of Fatty15

We're talking about one new paper on C15 being published around the world per week. So it's it's exploding and then. Yeah. And the last part I did want to make with regard to this is with specific to menopause studies showing that during menopause and premenopausal and that when our estrogen levels drop, that estrogen estrogen actually serves as a means to protect us against for us.

And when our estrogen drops, it allows for us to kind of. Oh gosh, light up. So it's again, very relevant to. A direct correlation to decrease estrogen levels and increase fair up ptosis.

So, you know, we've been using fatty 15 in our community now for about a year. It's funny, we're coming up on the anniversary of when I learned about fatty 15.

And it's at the very conference that I'm going to see you at this next week. I was at IFM, and I remember I went to one of one of the people I know really well there, who is who is in executive in one of the supplement companies that I use regularly in my programs.

And I said to him, I said, who on this vendor floor, this is like where all the supplement companies around the world and all the bio hackers and all the everything is right there at this conference, they said, what's the one product in this room right now that you think I need to know about?

And this is from a different supplement company. I went to that support company and said, who do I need to know? And he walked me right over to the fatty 15 booth and introduced me to your probably director of education at the time.

She handed me the book, she handed me a couple months supply of fatty 15 and she said, go run labs on yourself. Do take this and run your labs again. And my hemoglobin ANC dropped.

So I'm one of those people that's always 5.6 no matter what. I mean I lift weights, I exercise, I'm a normal weight, I sleep like a rock star. I eat really healthy.

I have almost minimal sugar in my diet, I just run. My name is always 5.6. It's just a thing. So I was able to drop it a couple of points, which is a huge deal for me. So.

So how do we get fatty 15? Where do they get it? And I know you have a special coupon code for people. Do we do we do. And they can get them from you from from your from your site.

They can get them. There's. Yeah. You go. laurafrontiero.com And you go to my recommended by Laura page. Fatty 15 is right there on the supplements. And then you have a fun code for them right. That's right.

And then if you go to fatty 15 then you can use a menopause 15. Get an extra 15% off of of the product. So amazing. Yeah. Go go there. Check it out. You could read read about the supplement.

And then if you go to discover C15. Com, that's where all the peer reviewed literature is to keep up to date on the latest and greatest. And if you go to the resources page you can search by category, which is helpful as well. Yeah. It's so good.

Well you know, you know, as women are moving through perimenopause and menopause here and they're feeling like aging, you know, suddenly starts happening faster.

I know I felt like that. I can remember I hit menopause and was like, what the heck is actually happening here? I'm like, my body was just changing so quickly.

And there was a period where I felt less resilient. I've done a lot of things to to shift that now. It is no joke. It kind of hits you like a freight train, all these shift in hormones.

But based on everything you've learned through your research on C15 and healthy aging and cellular resilience, what actually gives you the most hope about our ability to support the body and protect ourselves and age?

Well, moving forward, where it feels like every strike is against us, like every time we turn around, I know there's another toxin in the environment.

Oh, did you get the parasites out of your body? Oh, there's a you know, it's just nonstop, right? Oh, I have to do this and that. So what gives you hope here?

Yeah, I mean that we have, you know, the dolphins help us discover a base, right? It's like a base of what it is that we need. And, and I have, you know, personally, my own experience with, with the benefits of fatty 50 and C15, I also hit menopause.

And you're absolutely right. It is a wall. And it's like it's a cliff is probably a better way to put it for for me. And it's just like all a sudden I wasn't sleeping.

And not just because of sweats. Right. And and I was getting tennis elbow and I don't play tennis. My hip started her. I was like, what is happening? And so a accelerated aging. Absolutely.

Now we're understanding more and more of the science behind it. It is there's so many factors. It is not all about

C15, but I can tell you that when I actually doubled my dose, when that happened and when I went to the two capsules a day, when I hit that the joint for me, the joint pain went away, my sleep came back and was restored.

And so I think just being able to be empowered to get a base back that is literally meant to keep ourselves more stable, to keep our metabolism more balanced, to kind of give us a fighting chance against us and these aging driving factors.

It's a great place to start and then be able to work with folks like you, Laura, who can help, like how do you build your own personal health stack to help get you not only get you through and survive this variant, but to actually be on the other side thriving, I thought, than ever.

And it's empowering. It is, it is. And that is our goal is not to survive this transition, but to come out on the other side powerful. And, you know, fatty 15 has become a regular in my routine.

I want to know, is there anybody who shouldn't take fatty 15? Because I know right now people are thinking, I'm getting this and I'm getting a bottle for my daughter, in a bottle for my son, and everybody's getting it in their stocking at Christmas.

And this is what people are thinking right now, like Patty 15 for everybody. So what what who shouldn't take it? Anybody? We haven't found anyone who shouldn't take it.

And we believe we would be keeping an eye out. But again, I think it's because it's serving as this essential nutrient that increasingly we aren't getting in our diet.

We actually just kicked off a major campaign called Healthy Aging for all because of all the research coming out around children's health. So we have kids, right?

So we have a kids gummy now, and we have an adult, the Apple Manganese Gummies for adults and Berry Blast for kids. And so so we're actually because the science we have always followed the science, and because it's getting so strong that we all needed that we've created more form factors that help, that can help increase the accessibility of fatty 15 to.

Kids, to kids, everybody. Oh, that's so good. It's so good. Is there any final words you want to share with our audience? I know, I know, you speak a lot of places.

You're on a lot of stages, you're traveling all over the place. You're at conferences. So I know you're trying to get the word out. So what is the word?

What is the word that Stephanie needs everybody to hear right now? Yes, we have an opportunity, a true opportunity to improve global health, including individual people within our lives, within ourselves.

We encourage people to go read the science, go learn more about C15. You know, if if the supplement is something that's going to work for you, go try the supplement.

But it's really more about the science, raising awareness about it. Get that conversation going because again, we can't explain it away anymore, and we really can't afford to wait longer to be able to get this conversation going, to get C15 back into our lives, whether it's changing agricultural practices, finding ways to get this into our food, and then including a supplement as part of the solution.

But it's a much, much bigger movement than that and really appreciate you being a part of it. Oh, I love being a part of something so powerful. It makes me excited.

And it's been an absolute pleasure to spend time with you again and interview you and share the good word. And like, like I said, one of these days we're going to go sit down, get a cup of coffee, and I'm going to hear all about that dolphin research.

I want to know. I want to know all the funny ins and outs of it. There's got to be a bloopers reel. Oh. There's got to be. I hope there's some video footage of you working with those dolphins.

Somewhere. Somewhere, somewhere. I know, good stuff. Good stuff. Well, I hope everybody that you've really enjoyed this, this talk with Doctor Stephanie.

And until next time, everyone take good care. Bye now. Bye.