Introduction and mission to empower women

I am so excited for our conversation and thank you so much, Doctor Catherine Anson, for being here today. I am thrilled because I think listeners and viewers are going to leave here with with so much insightful and powerful information.

So welcome. Thank you so much. Yes. And, powerful information and some action steps that you can take as soon as, tomorrow. So, this knowledge is power, and we're trying to empower you so you can sail through these life changes and hormonal changes with greater ease, dignity, comfort and, energy.

And who doesn't want all of those? I know, and I think it's such an important thing that we. And I know you feel the same. We empower women to take ownership and to direct their health and be informed consumers, especially in the world of like hormone and thyroid and energy.

I think we can't quite yet count on the traditional kind of conventional approach to get us through in an optimal way where we can thrive. So I think this is this is an exciting conversation.

Yeah. Tell me a little bit about how you ended up in the world of algae. Algae. I know before. We dig in. Yeah, it's an interesting specialty. Well, I tell people I didn't choose algae and chose me, and a little bit about me.

I'm Canadian by birth. I've lived in Boston, Massachusetts for 35 years. Or although I'm on my way to, living in Miami. And I mention Canada because I did all my education there.

I did an MBA, I had a corporate career, and then 15 years ago, my I have two young, two sisters, one younger, one older one. My younger sister developed breast cancer 15 years ago.

First of all, I want everyone to know she's she completely healed. So that's the best news of all. But as she was preparing for her chemotherapy, her oncologist, which happened to be, a woman, told her she needed to change her diet to a, an alkaline diet because it would be important for her healing.

Now, she didn't tell her what another diet was. It was good for her. So my younger sister called me. Not that I knew anything about nutrition at the time.

I was a corporate, marketing person. And, but I'm a very good researcher, and I loved my sister, so I said, I'll figure this out. And it turned out that an alkaline diet was mostly a plant based diet.

And there were two reasons why I believe her, oncologist wanted her to change to a plant based diet.

How Catherine Anson discovered algae

One is chlorophyl, and phytonutrients are proven scientifically to build your immune system. And chemo is known to wreak havoc on your immune system. Number two, turns out that there was a German scientist by the name of Otto Warburg, who back in the 40s, won a Nobel Prize for discovering that cancer cannot exist in cells if they are slightly alkaline.

So having an alkaline diet would prevent the cancer cells from growing in, if any further. So anyways, I helped her figure it out. She didn't go through chemo. She didn't change her diet.

She completely healed. I learned about plant based nutrition this was 15 years ago and nobody was talking about it. I'm a very action oriented person.

I thought, somebody needs to tell the world. So I dove in, gave up my career, went back to school, studied nutrition, taught plant based nutrition for a year.

And this is what really led me to algae, because I'm sure your listeners will relate to this. Most people know they should eat more plants and vegetables, but the truth is, they take a lot of time there, a lot of work.

They give some people gas and digestive issues and they go bad quickly. Husbands and children don't like to eat them. So I thought, I have to find a way to get the plant based nutrition into the people in a way that's effortless and easy.

And back to the drawing board. I went back and looked at everything I'd found for my sister, and when I got to algae, that's when the miracle happened.

Because first of all, algae is the most alkaline food in the world. It's the most nutrient dense food in the world. We have quotes from NASA that says one gram of algae has the same nutrition as 1000g of vegetables, 1 to 1000.

Turns out it's the most studied food in the world. There's 100,000 studies documenting all the health and healing benefits of algae, but most of the, all this knowledge is only in Asia has not made its way out here to America, because algae isn't grown here, because this is the next thing you need to know.

Algae is not a supplement. It is a food we grow. Yes, it's in the oceans, but we grow ours and freshwater. Here's to pictures of algae. Farms is a spirulina farm and this is a Chlorella farm.

So it's its food. And it's been used in Asia for 60 years, for health and wellness and longevity. And the best part of all is it comes in little tiny tablets or about the size of a baby aspirin.

I'm showing you two pictures. One is a darker one that spirulina is a blue green algae. And this is Chlorella, which is a green algae. So here's the great thing.

Each one of these little tablets has the same nutrition as an entire plate of vegetables. So while I'm talking to you now. Right, I just need to write.

This little tablet has the same thing as an entire plate. Vegetables. Now I can get all the alkaline, nutrient dense, vital nutrients. Highest protein in the world.

Three times more than than steak. High is chlorophyl 500 times more than arugula, plus some critical, antioxidants that you need to know as you go through perimenopause and menopause that will remove and reduce brain fog, weight gain, fatigue.

And I have the science to prove it. So this is why I'm so excited about algae and getting it to the world. It has to come from a good company because algae growing algae is not like growing broccoli. It's like making wine.

And so it's very affected by the way that it's grown and dried. And if you use high heat, like most of the algae companies do, you deactivate most of these critical antioxidants we're going to talk about that will protect you from all the symptoms you get from perimenopause and menopause.

They can be corrected naturally by the antioxidants and pigments in algae, and it's proven by science. But it has to be good algae or it won't work for you.

So that's why I'm excited in general for people to get the nutrition that they need effortlessly. We recommend ten spirulina tablets in the morning because it gives you energy.

We'll talk about the different algae. Spirulina gives you energy and protects your mitochondria. Chlorella pulls out toxins and builds your gut. Spirulina also builds your brain.

But, ten specially in the morning, ten Chlorella at night. Boom. It's your nutritional insurance. And it'll help you with all these hormonal changes that you're going through with food.

That is so incredible. One, just the story of how you arrived here. But to as a person who who my life's mission, right, is to help women not be tired at its core, like at Modern Thyroid Clinic.

That's what we do. And part of what I love about our approach and yours too, is you have solved the problem in helping people not be tired without doing a lot of work to not be tired, right?

They don't have to cook vegetables three times a day from scratch. And yes, they should. I mean, obviously we should also be eating vegetables, but if we can cover so many nutrient bases by just doing something simple and easy and convenient that is so, so powerful for long term health.

So thank you. I absolutely love it. I want to go back a couple steps, and I want you to tell me, like at its core elementary level, what is algae? Where does it come from?

What are the different types. Just the basic building blocks of this conversation. Well, the first thing to know, which is really interesting, algae was the first life on Earth almost 4 billion years ago.

Not just the first plant, the first life. And it was a sign of bacteria. Spirulina is, you're going to find out is not even a plant. It's a sign of bacteria.

So it was so spirulina virtually was the first life on Earth that I think there's something pretty spiritual about that, which is why I call spirulina spiritual.

Leena. Now, pretty funny, right? So anyway, the first life on Earth and then it's algae is its own food category, and it's everywhere. It's in the oceans, the lakes, the rivers of streams, the soil.

And there's two, main types of algae macroalgae and microalgae.

What algae is and why it matters

Macroalgae is that stream stuff that you see washing up on shore, also known as seaweed. It's only in the sea because, and it also has very high fiber, which is good for you, but virtually zero nutrition.

So only in the sea. Zero nutrition also has iodine, though, which can be good or not, depending on your situation, but, high fiber, zero nutrition microalgae, which is what we're talking about today, is not just in the sea.

It's everywhere, the lakes, rivers and streams. And it's microscopic in size. That's why it's called microalgae. You can't see it with your eye and it's so tiny, you could get almost a million of these on the head of a pin.

That's how small it is. So. And it's completely opposite to macroalgae. It has virtually zero neutral, fiber or in the case of spirulina, zero fiber. But it is the most nutrient dense food in the universe.

So when you consolidated into these tablets, as I have shown you, this is why it's so nutrient dense. Now, there's tens of thousands of strains of microalgae, only a few of macroalgae, tens of thousands.

The two that most people know about are blue green algae and green algae. And one strain of blue green algae is called spirulina. And one strain of Chlorella of green algae is Chlorella.

And I mention this because the only, sometimes the only time people may know anything about algae is when they read about it closing their favorite beach, and they get so upset and they may think that spirulina.

No, no no no, that's just another strain. It's like another family, that's doing it. And by the way, algae gets the bomb right? Because, it's closing your beach, but it only shows up when there are toxins and bacteria in the water.

It kills bacteria and absorbs toxins. It's the cleanup crew now. You couldn't see the toxins of the bacteria, but it was there. But you can see the algae.

And that's why people associate algae with this, negative influence. But it's actually a very good one. And it is the cleanup crew in your body, too. So while there's tens of thousands of streams spiraling into.

And Chlorella are the two that most people know that you could get anywhere from Whole Foods to Target or from us. But, the best algae is grown in Taiwan, which is where ours is grown.

The vast majority is grown in China or India, and they don't use as much care because they're lower price. So they have to get to market quickly. So they cut corners and use high, high heat to dry it.

But we don't. So this is why ours is. So we preserve all the nutrients. And again, we just grow it in fresh water, dry it into a powder, and then we press them into those little tablets that I showed you that we call bits because they're bits of nutrition.

There is nothing else in them except spirulina or chlorella. No caffeine, no chemicals, no binders, nothing. It's the it's a whole food. So, so I'm very proud that we sell food, and that when you take it, you know, that you're nourishing your body from the inside.

But, that algae is its own category. It's well known in Asia. They take it every day and have for 60 years. The Egyptians used it 2000 years ago. The Aztecs used it 250 years ago.

You just don't know about it here in America or anywhere outside of Asia, because it's not grown here and no one has told you about it. So, I do plan to grow it in America.

Actually, in Florida, because it which has the same climate as Taiwan. But I'm very, very proud to be educating people about the nutrient value. And I remind people you didn't know about collagen or chia or bone broth until a few years ago, but these are foods that have been used by indigenous peoples for centuries, and they're good for you for reasons so healthy is in the same territory it's been around.

It's not new, it's just new to you. So I'm trying to dispel all the mystery around it so people can understand what it is and why it works. Tell me to like the difference between the spirulina and the chlorella.

Tell me about their unique like nutrient profiles, what they do, how they benefit us and our health. Absolutely. So, they're quite different. There's different from each other as night is from day.

Spirulina is known as an energizing algae. And that's why we we call ours energy bits. Although, after a few years, I found out women didn't like the packaging.

I designed all the packaging. So we, And it has more collagen and collagen powder. So it helps your skin and hair, which is another issue. As women, we, our skin gets, you know, dry and we have issues.

So I created a second brand called spirulina. Duty belts. They're absolutely identical. I call them my twins. I consider my brands my children. So. But anyway, spirulina is very energizing, both in the moment and also at the cellular level.

And I'll explain that in next. So when we think of energy, we think of, you know, getting energy from an outside source. It might be from caffeine or sugar or chemicals, and those speed up the molecules and you get out, but you get a rush and then a crash.

The kind of energy you get from from spirulina is not that. It is not a stimulant. It gives you energy at the cellular level. And we'll get into a deeper conversation about that, because this cellular energy is created by something called mitochondria.

This is my sweet spot. I can hardly wait to help people understand the importance of mitochondria for your hormonal health. But this. So when you take spirulina, it's like putting a log on the fire, not, and wisp and with, stimulants.

It's like putting paper on a fire. A burst in a crash, a log gives you steady energy. So spirulina is known for that. And it also has very, very high protein.

And the other thing it's known for as the three times amount of protein as steak or fish, there is nothing in the world none thing with more, protein than spirulina.

In fact, the United Nations in 1974 held the Global Conference on Spirulina and declared it the answer to world hunger because it has three times the amount of protein as, any other food.

And it's a sustainable crop. And the thing to know is not only is, spirulina the highest protein, it's bioavailable protein. If you know anything about protein, your body can absorb protein in the current state.

It has to break it down into something called amino acids, which can take up two days to do when you have collagen in what's called peptides, which are clusters of aminos.

But algae is an individual amino, so it's bioavailable immediately to your body. And because spirulina is a bacteria, there is no cellulose wall for your body to break down.

So this is why athletes love it as a pre-workout, because they get access to all that energy instantly. Both because of the high protein and the B vitamins which convert it into glucose and energy.

And then also because it has nutrients that get into the mitochondria to allow them to generate more ATP. The other thing you need to know about spirulina is it's literally brain food.

We know that fatty fish are a brain food, and that's mostly because of the omega three that's in there. And I tell people, where do you think the fish get the omega three from?

They get it from algae in the ocean. But you don't need to eat fish if you want the big three, it's in the spirulina. And this is much more bioavailable.

But the reason, true reason why it's brain food is because. Remember I mentioned about how spirulina has antioxidants that protect the mitochondria to generate more ATP?

Spirulina vs. chlorella: key differences

Well guess what? Your brain has the most mitochondria in your entire body. There are 2 million mitochondria. Purcell in your brain. So when this spirulina gets into your body and helps protect and rejuvenate your mitochondria, the first place that's getting rejuvenated is your brain.

Brain fog gone. This is why it helps with focus. This is why it's brain food. So it's energizing, nourishing, high protein, food that also protects and restores your mitochondria and your brain functions.

So that's spirulina, a blue green algae, two pigments in it, which is why we packaged it in blue. Now, most people take it in the morning because that's when you're tired.

Also, that satisfies your hunger. One calorie per tablet. Zero carbs does not interfere with fasting. So if you're fasting or in a weight loss program or taking GLP one, please take this every single morning.

Ten tablets would be sufficient. 30 is, medicinal for more therapeutic amount. This will and make sure that your protein and your muscle does not waste as you get older or as you eat less.

This gives you the nutrients that that you need, including the protein. Very, very important for you to know. So that's spirulina. Now Chlorella is a different algae.

It's a green algae does not give you energy. We have them in these bags as well. And it's the chlorella is packaged in green because it's a green algae.

And what does it do? It builds your immune system and pulls out toxins and builds your and protects your gut health. So members spirulina nourishing energizing brain health.

This pulls out toxins highest chlorophyl in the world. Spirulina has the highest protein in the world. This has this reason why I. Chlorella is called Chlorella is because of the chlorophyl.

There's 500 times more chlorophyl in Chlorella than arugula, 25 times more than liquid chlorophyl. There is nothing in the world with more chlorophyl than chlorella.

And you say to yourself, well, what's so important about Chlorophyl? Well, lots of things and I'll show you this. First of all, chlorophyl is chemical composition is almost identical to your blood.

So when you have high chlorophyl, you are building in your blood and your this is your hemoglobin and healthy blood gives you a healthier body, allows you to, be nourished, but allows your brain everything to function better.

So that's number one. Chlorophyl builds your blood. Chlorophyl also kills bacteria, whether it's in your mouth or your colon. Anywhere. So, you want to be killing those that bacteria.

And chlorophyl is a very alkaline, nutrient. Remember I mentioned that I started this because of the my sister's oncologist telling her to have an alkaline diet.

Chlorophyl is alkaline. So it builds your blood, kills bacteria, and makes your cells alkaline to be sure they are nourished and, high oxygen to protect you from all sorts of areas.

The other amazing thing about Chlorella is it has a hard cell wall. Remember, spirulina has no wall at all. And what's so incredible about this hard cellulose wall is that attaches to toxins and all the heavy metals lead, mercury, radiation, aluminum, pesticides, glyphosate, alcohol, lactic acid and chelating them. So, chlorophyl is cleansing and there's chlorophyl in spirulina too, but not this.

It has this hard cell wall that is very detoxing. So that's very important. And there's endless amounts of studies that document this. The other amazing thing about that hard cell wall is it has fiber in it.

So it feeds your gut biome, which needs fiber to create what's called short chain fatty acids to keep your, your gut healthy. And because it has all the nutrients that feed your immune system, which, by the way, are all in your gut, 80% made in your gut.

This is very much a gut health algae. So, it has other restorative properties. It has the highest tryptophan in the world, which is a precursor to melatonin.

So it helps you get into sleep. It has something called chlorella growth factor that stimulates the growth of your cells. So, so they grow back healthier.

And because when you sleep, your body goes through a detox repair cycle. So we recommend the chlorella before bed. You could take it in the morning as well, if you want, but definitely take it before bed, because then it will help you get into that deep sleep.

It will pull out what I call the junk in your trunk because it also stimulates peristalsis. So spirulina gives you all the nourishment that you need in.

But another part of being healthy is pulling all the toxins out that you don't want. So this is this will do this. Pull them out and give you a happy trip to the bathroom in the in the morning.

So they're very, very different. This is a wellness algae. Spirulina is a nourishing brain health algae. So you can see they they they do completely different things.

I love it. And so would you recommend the, the, the, chlorella to be taken at night whereas the spirulina is in the morning. Is that generally the recommendation? Yes.

And you can take them any time of day. We even have a brand called Vitality Bidoof. That's a blend of the two of them, if you just want to simplify things.

But, you'll get the best value and the maximum impact by taking the chlorella at night. By the way, you can take spirulina at lunch in the afternoon any time you want energy, focus.

Brain. Brain focus. Hunger. Chlorella just won't give you energy or satisfy your hunger. And ten again would be sufficient for, just maintaining. I call spirulina your, nutritional insurance, and I call Chlorella your health insurance.

But in both cases, 30 would be a, a therapeutic amount. If so, if you're recovering from a thyroid condition or cancer or heart disease or diabetes, 30 would be a better number.

And same with Chlorella. 30 would be a therapeutic amount. But ten would be sufficient for maintaining your health. And just to let you know, when we have a discount code at the end to share with people.

If you took ten a day, ten a day, the bag is the best value. It works out to a dollar a day. So, and as you'll probably find from other experts, the things that are most valuable for you to maintain your health, either in at any time of age, but certainly in perimenopause and definitely after menopause.

Things that are most important are sleep, good nutrition and movement. And so spirulina gives you the energy for movement, Chlorella as the nutrients that help you get to sleep.

And they both give you the nutrients that you need. And sleep and movement are free. And the good nutrition that you find in these two at a dollar a day is as close to free as you're going to get.

So, they're the three pillars that I rely on personally, for my own health and maintaining my my livelihood and energy levels. At my age. And I'm, as I mentioned earlier, 68, well, soon to be 69, so I'm very close to 70.

But, this is my own hair. This is my own skin. I don't take any Botox. Somebody asked me if they were my own teeth. Yeah, and they are, I have mostly young millennials working for me.

I travel nonstop. I just got my PhD, so I want women at any age, but particularly at menopause, to know that there is something out there for you that will help you.

And it's food and it works. It's heavily documented in science, and I'm a I'm the poster child for for that. So I'm very eager to help other women, sail through life with more energy and, focus and, and not have to worry about having these symptoms hit them at a time, at any time of their life.

Right? Especially at such, like, an enjoyable time. And I think we serve really the same people. It's like women who have thyroid issues, have hormone dysregulation or moving through perimenopause, menopause.

And I know all of those are so intertwined with mitochondrial function, inflammation, hormone dysregulation. We started we sort of hit this peak of chronic disease and shifts in our energy and metabolism.

Tell me about how spirulina or chlorella could play a role in protecting women's health in these sort of vulnerable times. Thank you. Great question. Well, there's a lot of science and I'm holding up one.

I'll send you the link to this this particular report is called Mitochondrial Estrogen and Female Brain Aging. And on the first page there's a chart. I'm going to show you another chart of my own that shows that during the perimenopause your estrogen levels start to fall and they plummet.

At 50 when menopause and isn't 40 and 40 is when these the estrogen levels are dropping. And this is also when this is the last image of the mitochondria and it's in the stars.

Mitochondria, hormones, and menopause

So where there's inflammation and after 50 the inflammation dramatically increases. So and I have a similar chart shows you that, you know, our health, we take our health for granted right?

When we're young, we have energy focus in our 20s and 30s. We're, you know, hitting our stride and then boom at 40 and 50 and 60 and later, this is when all this chronic disease and and, either it's hormonal issues, weight gain, brain fog, sleep issues all start to hit.

And you say to yourself, what is going on? I certainly said to myself, what is going on? And, and what can we do about it? And I have the answers to both of them.

So what is going on is the fact that we have been on Earth for 2 million years, and we, for almost million point nine years, died at 30. Our bodies are biologically programed to expect death at 30, but in the last 150 years, through a variety of reasons, we are now living to 60 and 70 and 80 and beyond.

However, biologically, our bodies have not caught up with our lifestyle. And so the things that have been protecting us and our health and giving us energy and focus, things like, melatonin that have helped us sleep, hormones that have kept our skin, healthy and our brain active and an antioxidant I'm going to talk to you about because it's in the highest concentration in spirulina and is dramatically needed to protect your mitochondria.

It's called superoxide dismutase. I know it's a mouthful. It's short for for. So sod is another word. It's called superoxide dismutase. And so why. So what happens at the age of 30.

Your body slows down the production of hormones superoxide dismutase melatonin. And at 40 it falls off a cliff. And these things have been used by your body up until then to give you all the energy and protection you need from disease.

And so and superoxide dismutase, which is not well known like melatonin is or hormones, it's it needs to be better known by women in particular because it is the most important antioxidant that will protect your mitochondria, and your mitochondria protect you because what they do is they generate cellular energy.

So here's a little bit of a science lesson. Might have. Conduit are known as being the powerhouse of the cell. They create this stuff called ATP that gives you energy for everything, not just running to the store or going for a walk.

It's for walking, talking, breathing, lymphatic system, heartbeat, digestion, neurotransmitters. Everything requires cellular energy. But as you get older, your mitochondria decrease in number because they get damaged.

And then the ones that you do have are not working properly. I make the analogy to a building. The things that allow you to do work in a building our lives.

If you don't have your lights, the lights turned on, or your electricity gets shut off because you didn't pay your bill, or maybe you're in a storm. Very hard to do any work.

And in your body, what keeps your body working? Are the mitochondria. They are the lights that keep your body alive. Your brain, your heart, everything.

But as you get older, they get damaged and they die. So it's like having the lights go out slowly but surely. Which

means you have less and less energy, which means your body doesn't have enough energy to protect you from anything, whether it's a virus or, just to think properly.

And the reason is because the this antioxidant that's protecting your mitochondria has plummeted. So what is this antioxidant? And we know that we know what antioxidants are, right?

They're they're, molecules with extra electrons because a free radical is damages cells. A free radical is a molecule with an unpaired electrons. So what it does is it steals an electron from the neighboring molecule to create balance, but that causes tissue damage.

And then that one's unbalanced. So it steals from another one. And on and on it goes. These great things called free antioxidants are like the kid who brought extra lunches for everybody at school.

Just gives them away, neutralizes them, makes them happy, calms them down. No to no tissue damage. But the problem is your mitochondria have two cell walls.

All of your other cells have one. And that second inner membrane prevents most of the antioxidants that we know, like vitamin C and vitamin E from getting in.

So the most free radicals or antioxidants can't get in there to stop this free radical damage and wise free radical damage occurring in the first place.

Well, you're mitochondria, remember? They're the ones that are these little peanut shaped things that are inside your cells that generate all that cellular energy.

They have their own DNA, and it's that DNA that creates all the all this cellular energy called ATP. But a byproduct of making this ATP are free radicals.

And yet your mitochondrial DNA are right there, right where all that free radical damage is occurring. So they are constantly being damaged because most antioxidants can't get into that inner membrane.

They start dying. And so what I want to know is the most damaging free radical is something called superoxide. So here's that mitochondria, that here's that inner membrane preventing most any toxins from getting in there.

But that's where the DNA is. That's where the ATP is and that's where the free radicals are. So this, this one type of anti a free radical. It's called superoxide.

Why is it so damaging. It has three unpaired electrons. So it's three times as damaging to your mitochondria. And this thing called superoxide dismutase which your body makes from you until the age of 30 or 40.

And then it plummets. It's the thing that goes in there and neutralizes those free radicals. It's like having the firemen in there. It holds them down, turns them into water and oxygen, harmless water and oxygen.

I make the analogy of superoxide dismutase as being like a big golf umbrella. We've all been we've all seen those big golf umbrellas. If you weather your golf course or shopping and you have one, it doesn't matter if it's raining, you're protected because it's so big, you don't get a whole family under there.

So your body makes the superoxide dismutase, which behaves like a big golf umbrella through your entire life until 30 and then 40. And by 40, that golf umbrella shrunken down to about the size of the total umbrella, getting getting a little bit of drops.

And then by 50, it's the size of a cocktail umbrella. So now the reign of free radicals always occurred. But you had been protected. Now you're not protected anymore.

Now your your mitochondria are getting damaged. And so they start to die or mutate. And here's the connection to

hormones. Your mitochondria, are they they create a precursor to things like estrogen.

So when they get damaged they're not able to make estrogen. So that plummets. And here's the other thing that people don't know. Actually, I wasn't aware of myself until recently.

Estrogen is an antioxidant. It protects the mitochondria from free radical damage. So it's a double edged sword. As your mitochondria get damaged, they can't make as much Tritan.

So now your estrogen drops. And when your estrogen drops, you have less fruit. Protects you as an antioxidant. So now your mitochondria get damaged. You see how the cycle continues itself.

So the drop in estrogen causes mitochondrial damage, and the damage of mitochondria causes a drop of that certain. So what we need is the firemen to get in there and start protecting the mitochondria again.

And that's what superoxide dismutase does. But your body's not making it for you anymore after 40. And most the world does not know yet that spirulina has the highest concentration of superoxide dismutase in the universe.

But there's a catch. Superoxide dismutase is also an enzyme. And anyone knows anything about nutrition knows that enzymes are deactivated by high heat.

So most virtually all the other lower priced algae companies cut corners to get to market quickly. And what do they do? They use high heat to dry their algae.

So it so the superoxide dismutase was there originally, but it got deactivated by high heat. So it's not going to give you the hormonal protection that you need or the mitochondrial protection.

We have never used high heat. So our algae are spirulina and Chlorella because it has some of it in there as well. Can get to work. It can get into the mitochondria, restore the mitochondria, protect the mitochondria.

So now that antioxidant benefit is there. And what does it do. Turns the lights back on. It turns the lights back on in your brain so you don't have it doesn't take long like within 24 hours.

We're not talking months 24 hours. We have people with Alzheimer's and and dementia. Within 24 hours, their brain fog is gone. It also has protective, capabilities for your heart.

Women's suffer heart attacks. And their symptoms are different. But there's 25,000 studies in the scientific libraries proving the benefits of superoxide dismutase to reduce inflammation, protect mitochondria, stop, heart disease, brain disease, Alzheimer's, brave everything.

The science is there. People just don't know that. Now you can get it from spirulina, but it has to be raw. So you can either take it raw, like, properties institute service or patients raw spirulina.

Mostly because of the chlorophyl and the phytonutrients and the superoxide dismutase, that are very healing. Or you can use ours, which is has the same protective capabilities because it's not been exposed to high heat.

So, so I'm singing from the rooftops right here. So you don't have to go on all these crazy medications. You know, some are necessary for certain situations.

I'm not sort of. And please listen to your physician. I'm not a doctor. I have a PhD, but it's for science purposes. Research. But I do want to know. And I'm very proud that as a fellow female, there's something that can be taken that's effortless food based.

We do our we do third party lab tests to prove that our nutrients and, are what they are, and there's no toxins. You can give it to any adult child of any age.

It is the most nutrient dense food to protect your muscle mass. It will protect your brain, but it will help get your hormonal situation. Those those symptoms of brain fog and night sweats and poor sleep and weight gain, fatigue particularly.

It will get you back on track naturally. So it's it's pretty amazing stuff. You know, it's interesting, like, I think even in the world of health and wellness where people are pursuing health, then, you know, really living their life around not I think it's still understated how important one mitochondrial function is and two, neutralizing free radicals and inflammation.

Right. Like these are very, very long term powerful ways to influence health outcomes. And just like quality of life and your ability to thrive throughout the years.

And honestly, I had no idea that spirulina was such a powerful mechanism for this. So I am so excited. And and if you'll indulge me, I'll give you a little bit more science because let's do it.

It's it's so important to me because I feel if you understand something, it's less frightening. And I think the problem is none of us, including myself, until my sister got sick, knew anything about our body.

We don't know anything about our bodies. We don't know what our bodies need because. But it's like following a recipe if you know what's needed to make that perfect, whatever.

It works. So if we know what our body, our brain, our mitochondria need, it will work honestly and I tell people I never eat alone. I always eat with my mitochondria because I know we're on the same team here.

So if I give my mitochondria what it needs, it will give me what I need, and we're going to sail through life together. So I'm going to give you a little bit more science, because I want to be sure you understand this.

And you know, that's not smoke and mirrors. So here's that picture again of the mitochondria and that inner membrane, which is impenetrable by most antioxidants.

So in that inner membrane, that's exactly where this, ATP, which is the cellular energy is created. And how exactly is it created? Well, we eat food and then the food gets converted to glucose and then glucose into electrons.

And then there's this thing called the electron transport chain. I know scientists, they never come up with anything as sexy. It's just it is what it is.

There's that membrane, right, that I showed you. And the way that the energy is actually created is that there's these molecules embedded in them in the membrane.

And what they do is they pass electrons from one to the next, and at the end you get ATP energy. But the trick, it's sort of like a relay race. We've all seen relay races where the runner has a baton and they pass the baton to the next runner, the next runner runs and pass the baton, and then they hopefully cross the line finish line before anybody else and they win.

Well, think of these molecules as the runners. But instead of a baton being passed, they're passing electrons. And there's this I'll tell you a little bit more.

There's two helper molecules, this one called cytochrome c. I want to talk to you a little bit about this. So if the electrons are passed efficiently they are able to generate ATP efficiently.

Problem solved. Right. The problem is as you get older and your mitochondria start to get damaged, what happens is here's a healthy mitochondria with all those little molecules embedded so they can make the pass as you get damaged mitochondria.

Guess what the mitochondria expand. Two things happen now that the molecules are so far apart from one

another, they can't pass the electron. So your your ATP production is decreased right.

So this is one of the things as your mitochondria get damaged they expand less ATP. The second problem is that electron that was supposed to be passed doesn't disappear.

What does it do.

Autoimmune health, detox, and gut support

It leaks out and becomes a free radical which means the mitochondria expand even more, causing more damage until it explodes. It's called necrosis spills. All its free radicals out to the next mitochondria, and the process repeats itself.

This is why it's a downward spiral as you have damaged mitochondria. So the trick is to get your mitochondria healthy again. So A you can have more ATP because they're close together and they can make the pass easier.

And B so there's fewer free radicals leaking out to cause that free damage. Now I'm going to tell you one more cool thing, particularly about spirulina.

So here's those molecules again in the membrane. And remember I mentioned this little is a helper molecule called cytochrome c. Think of it like a Tesla that does speed speeds up the the process.

And this is one of the reasons also why spirulina gives you energy. And this chlorella does not because that blue pigment that's in here which is called five cosine.

And I'll spell it for you as you probably never heard it either. It's y c o c y n. I'm so what that blue pigment in spirulina does is it's on in a healthy cell.

It speeds up that cytochrome c molecule room. So now this is one of the reasons why you get more energy from spirulina. Because it's speeding up that helper molecule.

But here's the really cool thing. In an unhealthy cell, which is known as a senescent cell or a cancer cell, that blue pigment detects that it's a cancer cell or senescent cell and ejects the cytochrome c molecule, which goes and kills the cancer cell or the senescence cell.

And it's proven in science. Here's a report with cancer cells dyed them purple. And put five cosine in into the petri dish. Here's where it started. Here's where it ended in 24 hours.

The chemotherapy companies use viscose iron. That's how you spell it in their treatments now. And they determine whether it's working or not by the amount of cytochrome c that's in your bloodstream or in your, in your plasma.

So Mother Nature has given us a way to a protect our mitochondria because of that superoxide dismutase, particularly as we get older and don't have it in our bodies anymore.

And as a bonus, she gave us a sign in which is gives us more energy, as if it's a healthy cell and, eliminates cancer cells by ejecting the cytochrome c molecule if it's a cancer or senescence cell automatically.

This is why I call spirulina intelligent food. You have to be intelligent to take it, and it knows what to do in your body. Unbelievable. Remember first life on earth, spiritual.

Gina, I love it. It's here. You can maybe right? Right. And even like senescent cells are responsible for the breakdown of our collagen. How we age like slowing that process is slowing the breakdown of our body over time in pretty much every single facet that is fascinating.

Senescent cells are cells that have subdivided so frequently that they, they can't subdivide anymore and the DNA

gets damaged. But they're inflammatory.

And so you can get rid of them by, through things like cold plunges, fasting, and in fact, we did a clinical trial just this summer, a small one, where we gave, people over 55, half women, half men, spirulina, for 30 days, we took a blood test first using a company called me screen that measures mitochondrial health.

And all we did was help them take spirulina for 30 days. After seven days, we did, another blood test. In 30 days, we do another blood test. And the, doctors, the PhDs overseeing the study for us said they they'd never seen the kind of results, even after seven days, that they'd seen with ours, except in another clinical trial where they had the patients do intermittent fasting for 90 days.

And after 90 days, the senescent cells had been killed. There was a top AG, which is basically complaining in your in your cells. So they work very well.

90 days of intermittent fasting. We got the same results after seven days of spirulina. So so that's the other thing I should have put is my fourth pillar is fasting for health, which is free sleep movement, fasting and spirulina and chlorella, which is almost free at a dollar a day.

So those four things I honestly promise you, we'll get to through perimenopause, menopause with fewer or. No, I don't want to promise no, but certainly fewer symptoms and do it with more with ease.

You can swallow water in seconds. You can get these nutrients down into your body. And again, spirulina gets absorbed so quickly because it's, it has no cellulose wall.

So very bioavailable nutrition for getting your hormones, your estrogen and your symptoms under control. Well, I will not be missing mine. I am so excited.

So, like, selfishly, to learn all of this for myself. Talk to me. I know another kind of thing that really hits us. Women, especially, I think around our 30s, 40s, 50s is a lot of gut issues, a lot of autoimmune issues.

Tell me how your products, how algae in general can help with this. Yeah, absolutely. Well, there's so much autoimmune, and autoimmune, you know, it's a it's a catch all phrase for things that nobody really understands what's really causing it.

And so much of it is environmental. There are so many toxins in our food and the flip side is our soils are so over crop that there's no nutrition in the soil.

So even if you are eating plants, you are not getting the nutrition you need. You get calories and fiber, but not the nutrition. So but the comic, that perfect storm of, too many toxins and not enough nutrition, nutrition.

And then there's things like lectins and oxalates that are found in very high concentrations in some that some plants like, nightshade vegetables, kale, spinach.

I'm telling people now, please don't eat kale. It's it's can be very, very, damaging to your gut lining because lectins and oxalates are very sharp proteins and they puncture your stomach lining, which allows food to get into your bloodstream.

So now your body's reacting. It doesn't know what's why the stuff is there. So it's, counter balance is attacking itself. And that leads to the autoimmune system.

So Chlorella is known for being a gut health algae for a couple of reasons. First of all, there are no lecterns or oxalates in algae. And. Oh, interesting.

Yeah. And that's why Doctor Steven Gundry has had me on his podcast multiple times. So these lectins and oxalates, in case you don't know, that they're inserted in plants, mostly in high concentration almonds and also

very, very high.

And the plants develop them to protect themselves from predators, bugs, animals because they do the same thing to their tummies to, well, algae came from the ocean, not a land plant, never had to develop lectins or oxalates to protect itself.

So any you can get all the green phytonutrients and chlorophyl, carnivores. Listen up. This is for you too, because you're not eating. Probably those plants because of the lectins and oxalates and other reasons, you can get them all the nutrients you need from the spirulina chlorella.

No. Legends are oxalates. Zero carbs as well. So that's number one. Chlorella, as I mentioned, does have fiber that feeds your gut biome. So if you're not eating fiber, you're missing out on these nutrients.

But you may not be eating fiber because it gives you gas, or you're a carnivore, or you're worried as you should be by all the toxins that are in there.

I used to be a huge salad eater when I travel. Not anymore. Because 99% chance whatever they're serving me is not, is not going to be organic. And so I'm just ingesting more toxins.

So I stick to some basics like grass fed, animal protein and a lot of eggs, you know, a lot of eggs. When I travel. So Chlorella feeds the gut biome, without any lectins or oxalates.

Gives you the chlorophyl, which I remember I mentioned is very cleansing. There's a high rise of called colon cancer. Also, because if you're not having bowel movements and let's face it, as you get older, bowel movements are more difficult, for most people, if you're on medication, you're probably constipated.

If you're eating dairy, you're probably constipated and not moving enough, not drinking enough water. You know, all these conditions represent about 99% of us.

So you got to get rid of what I call the junk in your trunk, because if you don't, it sits there. And and that's stuff your body didn't want in your bloodstream is circulating around.

And what does it do is picking up all those toxins that are sitting down there. I say it's like having a garbage truck parked in front of your house permanently.

Not a pretty picture. So you need those movements and chlorella does that for you. You don't need excess fiber if you don't want to. The chlorophyl in the fiber.

It's just what chlorella does. It gets rid of all that junk in your trunk. So that's very healing to your colon and to your body in general. And then it has all these other, there's about 10 or 12 nutrients that your, that doctors have identified, you know, zinc and chlorophyl and vitamin A that are very important for your immune system, your immune system.

Think of your immune system as the police force in your body, identifies invaders, kills them and drags them out. So but you have to give the police force a getaway car and whatever they need to identify that invader and get rid of them.

Chlorella has all the nutrients that build your immune system, so you have an active police force surveilling your body to, identify what shouldn't be there, kill it.

It activates things like T cells and B cells and killer cells. And these are all things that are made in your gut. So chlorella helps you with that, which again heals your gut.

And activates your immune system. So your immune system is very tied to your gut health, and your gut health is very tied to your brain health with it's connected by something called the vagus nerve.

This is why I think it's so, you know, eloquent that spirulina is very much brain food and chlorella is very much gut food. And the two of them are connected by your vagus nerve.

So, so they just seem to work so well together. So between the healing of the gut, the fiber, the chlorophyl, which kills bacteria, pulling out the toxins, because those toxins think of toxins, as, you know, you know, really, well, they're more than annoying.

They're damaging. But what they do is they lodge in your cell walls. And, even if you're eating proper nutrition, if you don't get the toxins out, it's like having someone.

I live in Boston in the wintertime, all the parking spots on the street get taken. And, when it snows, you know, people get very protective. So maybe you had a spot parking spot, but if someone took your parking spot, you're out of luck.

Toxins lodged in your cell walls. And basically take the parking spot, which is the receptor cell that would like the nutrition that you're getting from spirulina.

You need to get rid of those, those, cars that are, you know, taking the spot. So the nutrition can get in. And that's what chlorella does. It pulls out the toxins that are lodged in your cells.

In fact, it works so quickly in your blood that if you drink alcohol, you are stone sober. In an hour and a half. It takes that long for chlorella to clean out your blood.

Also, Chlorella has the highest glutathione zone in the world, which we also known as a detoxing nutrient and very important for your liver. It takes about seven days to detox cells and, anywhere from 1 to 6 months to detox, organs.

It's all about the density of the cell structure, but your your, blood is very porous, so it can be cleaned out very, very, very rapidly. And remember, clean blood, nutrient, high density blood will ease your body into greater health anyways because it's holding more oxygen because of those blood.

The red hemoglobin is what carries oxygen to your blood. To your to your cells. And it will also make sure that your, alkalinity is, is preserved. Remember, again, this alkalinity thing keeps showing up.

And what you may not know is that your blood needs to be even more of the line than your cells. Your cells 7.1 is a good number because the range is 0 to 14, but your blood needs to be 7.34.

And your body is so intelligent that when you eat acidic food like dairy and processed foods and alcohol, it will change the acidity of your blood. And if it changes, you would die.

So your body is so smart it goes, oops, too much acidity. I got to neutralize that for you. So what does it do? It pulls out all the minerals calcium, magnesium, potassium that are stored where?

In your bones, in your cells and your organs, and pulls it into your blood to immediately neutralize that acidity. But if you're constantly eating acidic foods, this wears down your immune system and your bones.

And what do women suffer from after the age of 50 and 60? Paralysis? And this is one of the contributors, because you're constantly pulling that beautiful storage of minerals out of your bones into your bloodstream to, to neutralize it.

So, so once again, algae has that ability to protect your blood, protect your bones, protect your brain. Women suffer from or osteoporosis for many reasons, but one of them is our bones are just smaller than men's.

So they get they get, they they develop these these holes in these weaknesses much sooner. So but it doesn't have to be that way. Right. So this is why if, if there wasn't so much science documenting all these things, I'm

telling you, you would almost like to.

You wouldn't believe it's true. How can something do so much? And that's why it took me. I was run the company now almost 15 years that I was by myself for the first four because I started reading the science that this can't be true if that's true, why don't people know about it?

But it is true and they don't know about it because it's not grown here and no one's told you so. That's what I'm trying to. Well, I, I am so inspired by all of this.

And you've taught me so much today. I can only imagine everyone else listening feels the same. But I will not be missing my energy beats. I will go day and night.

I won't be missing that. Good. So thank you. Thank you for sharing all of the time and energy that you've put into this. And thank you for making a way for women and men.

I hate to exclude men, but I'm like, in the service of women is my life's goal. But thank you for making it available and easy for us and to touch on and save.

Where to find Energy Bits and closing remarks

Yeah. So thank you for the work that you've put into this. Tell us how we can find you and anything else that we should know about you and energy. That's, Well, you can come to visit us at energy boots.com e and e r g y b.

It's, where you can purchase. We have large bags. We have these fun canisters. I designed everything I. I can't help people if I can't get the algae into them.

So I try to make it as visually compelling as possible. And the canisters come with a bag inside them that you open up, and then you just shake the tablets out through the opening.

So you only buy canister once, and then you refill it, with the bag. And then we also have, single servings that are really terrific for traveling with.

You'll never have to eat crappy carbs at an airport or, in between meetings or rushing, you know, your kids to soccer practice or whatever. So energy boots.com for purchasing anything.

We have a 20% discount code, which is, r h t s, which stands, of course, for reversing Hashimoto's and Thyroid Summit. It works on everything all the time, so don't worry is no time limit.

But come and use that code. Our h t s for 20% off. We also write a full blog. If you just want to come and read, and if you're not writing to make a big purchase again, if you buy the large bag, it's normally 130 with the discount comes to 100 for but ten tablets a day cost you only a dollar a day with your discount code.

But you could also go to Amazon. You're still not sure. We sell them in single pouches for $6. There's 30 tablets in a pouch, so I'm out, and then come back to the website so that you can get a better value.

We have subscription programs as well, so. But the the code only works on single purchases. So, that's how. And also, we're active on social media. Instagram is our main handle, energy bits also on Facebook.

We do I have a special handle for beauty, but it's just very girly. And it's at beauty beds. But we're very science oriented. We want to educate people.

I speak all over the country. We're here to help people, especially women. Because I started the company because of my sister. I wrote a little booklet called The Algae Love Story because it was, I started the the journey out of love for my sister.

Algae was a gift to us. Out of love from the universe, mother nature, whoever you want to believe in it. And my commitment is to bring this to you so that you can understand it and enjoy it.

And live a, a symptom free life as long as you are on this earth. So, this is my path, and I'm here for the long haul. I'm here for you. Thank you for letting me share and, LG's here for you, too.

Thank you so much. I so appreciate it. It was absolutely enlightening. Thank you. Hey, one question for you, I so we're also doing through doctor talks a hormone summit, which I feel like is so incorporated into this conversation to not only the thyroid.

I'm wondering I and I'll ask Brett obviously because it's totally up to them. But I'm wondering if we might be able to repurpose this interview for that as well.

Sure, sure. Let me ask him. The one thing I'd want you to do, Catherine, is rerecord the discount code, like make up another discount code that is thyroid centric and you have plenty of time to activate it and everything.

Yes, yes. So it's called the hormone. It's. Called. Let me get you the exact one. The exact name, Well, hang on, it's called, hormones and mental health.

Well, what? Well, I don't think it's taken, so it's, Or. Well, why don't we do? H h h I love it. I know for sure that's gone, so let's just record that, okay?

Yeah. I know, right. Okay. Let me. So we have a great, 20% discount code for your community. So they can use it on any of their products. Doesn't matter whether it's bags or canisters or single pouches.

And the 20% discount code is h m h, which stands for Hormones and Mental Health. So come and visit us at Energy butts.com. Put the discount code h m h into the coupon box, and you'll be on your way to feeling better.

And having, much better, symptom free life, and helping your hormones and your, your body, regenerate and, sail into the into your life effortlessly. Thank you so much.