



#638 Algae: The Ultimate Superfood for Energy, Detox, and Cellular Health | Catharine Arnston

Dr. Wendy Myers

Welcome to the Myers Detox Podcast. I'm Dr. Wendy Myers, and on this show, we talk about everything related to heavy metal and chemical toxicity, the health issues caused by these toxins, and more advanced topics than you'll hear on other shows. We don't do the basics. I do stuff that I'm really interested in, like emotional trauma, bioenergetics, bioenergetic software, energy medicine, and advanced biohacking topics. Today, we have my friend Catharine Arnston on the show, and she's gonna be talking about the miracle of algae, specifically spirulina and chlorella. The United Nations has named these foods as the answer to world hunger.

So she's gonna be talking about all of their many benefits, how much you should take every day, how they power your mitochondria and your brain, how they can reverse aging, and essentially, the answer to fixing your metabolism and so many other benefits. Chlorella helps to fight radiation. It's been the number one selling supplement in Japan for many, many years. We'll talk about how these allergies can completely replace the supplements you're taking now, the synthetic vitamins that you're taking right now 'cause they meet all of your nutritional needs. There are even things that I take every single day. I take 30 of the spirulina every single day because if I don't, I'm hungry, I'm craving, I'm snacking, and things like that. So, I don't miss them.

Our guest today, Catharine Arnston, is an expert in algae nutrition. She's a wellness thought leader and experienced entrepreneur, and a sought-after speaker. Catharine has a PhD, MBA, and BA. She is a board-certified health coach. She's spent the last 15 years researching algae, writing papers, giving presentations, lecturing at conferences, and speaking on over 300 podcasts to explain the benefits of algae. And to do this, she's read thousands of scientific papers that detailed, validated, and confirmed allergies, nutritional health, longevity, and global benefits. Remarkably, none of these findings are known to consumers.

It's Catharine's vision and passion to change this. Her PhD has given her the scientific fluency that allows her to explain allergy with such simplicity in clarity, and it's quickly becoming obvious why algae is something we all urgently need, especially given the depletion of the soils and the poor nutrition in our foods as well. You can learn more about this algae and purchase it at energybits.com. Catharine, thanks so much for coming on the show.

Catharine Arnston

Well, thank you, Dr. Wendy. So glad to be here again

Dr. Wendy Myers

I've had you on many times before, at least a couple times before, because I love what you're doing. I love your products, so I take your energy bits every single day. If I don't, I'm absolutely starving. It's how I control my cravings, 'cause it gives you all the nutrition you need. I'm just hungry if I don't take them. So, I learned I have to take 30 a day, or I'm gonna be hungry. It's a snack.

Catharine Arnston

Good for you. And it's food. A lot of people think these tablets, 'cause they do look a bit like a supplement, but we call them bits 'cause they're bits of food. But they're so nourishing, satisfy your hunger, give you energy, whether you're just a busy person, a professional, or a mom, or whether you're on a weight loss program or taking GLP-1. To me, they're fundamental, and I call it your nutritional insurance,

in fact, because it gives you everything that you need for the day. And then chlorella, which is our detoxing algae, I call that your health insurance because it keeps your body healthy. They do completely different things in your body.

Dr. Wendy Myers

How did you start your company? What is your origin story?

Catharine Arnston

I like to tell people I didn't find algae. It found me. I'm actually Canadian by birth. I mentioned that because I have two sisters, who I'm close to. They're all I have left for my family. They both live in Canada. 17 years ago, my younger sister in Canada developed breast cancer. She's fine now. She was completely healed, but at the time, her oncologist told her to change her diet to an alkaline diet because it would be important for her healing. She was gonna go through chemo, but they didn't tell her what an alkaline diet was.

So my sister called me, not that I knew anything about nutrition. I have an MBA. I was doing international business, nothing to do with nutrition at all. But I'm a good researcher. So I went online, found out an alkaline diet was mostly a plant-based diet because of the chlorophyll and the phytonutrients that have been proven to build your immune system. And since she was going through chemo, you want to have a strong immune system. But then, as I dug deeper, I found out that there was a German scientist by the name of Otto Warburg, who won a Nobel prize in his thirties for discovering that cancer cannot exist in cells that are alkaline. So I have to believe that my sister's oncologist wanted her to have an alkaline diet to prevent the cancer from spreading into other cells.

So I did all this research. She changed her diet. She went through chemo. She is completely healed. I started learning about plant-based nutrition. Now, this was 17 years ago. Nobody was talking about plant-based nutrition then, and I was so mesmerized by what I was learning as I was spending all this time on PubMed that I decided I needed to learn more, and I needed to do something to help people understand the power of plant nutrition. So I went to a course in New York. It was

on the weekends at a school called the Institute for Integrative Nutrition. IIN is the short form. I went there, and I got a certificate. A lot of people have gone through that program. I was in the last second, the last class that was live. There were 1600 people in our class.

The classes were held at Avery Fisher Hall at Lincoln Center, if anybody knows New York, and it was so exciting. It was like going to a class. It was like being at a cross between an Oprah show and a rock concert. It was an unbelievable, really great lineup. But I graduated with this health coaching certificate. And then I thought, well, now what? So I put a curriculum together teaching plant-based nutrition at companies, hospitals, gyms, anywhere that would let me in. And this is what truly led me to algae because as I was teaching people the importance of green nutrition, they kept telling me, well, I don't like vegetables, or they give me gas, or they're too hard to cook or clean, " or " my kids won't eat them and I don't need to live at grocery stores.

So there were so many obstacles for people and anyone listening who certainly has children knows this. It's really hard to get vegetables on the plate for your family at dinnertime. So I went back to all the things I found from my sister, thinking there's gotta be a better way to get this green nutrition into people that doesn't give them gas, doesn't take a lot of work, doesn't take a lot of time, doesn't taste terrible. And when I got to algae, that's when the miracle happened because it's been studied for decades. There are over a hundred thousand studies documenting the different scientific benefits, whether it's preventing inflammation, preventing Alzheimer's, helping with gut biome energy, and losing weight.

It's unbelievable. The documentation about algae, spirulina and chlorella are the two we're gonna talk about. Then it turns out that it's been endorsed by international agencies for over 50 years. The United Nations declared spirulina algae the answer to world hunger because it has the highest concentration of protein in the world, three times the amount of protein is steak or fish or chicken and it's been used safely in Asia daily. They grow there hydroponically, which means in fresh water. That's where we grow ours. It's all grown in fresh water. Spirulina farms' is a picture of a chlorella farm.

Most algae does come from China or India when you grow ours in Taiwan, but as an agricultural industry there is as big as the beef industry here. So it's enormous. But the best part of it all is that when you grow it in those fresh water and then you dry it and press it into these little tablets about the size of baby aspirin. Each tablet has the same nutrition as an entire plate of vegetables. One tablet has about a pound of vegetables and nutrition because we have a quote from NASA that says, one gram of algae has the same nutrition as a thousand grams of fruits and vegetables. We sell them in these large bags of a thousand tablets. I use that quote to determine that each bag of a thousand tablets has the same nutrition as 551 pounds of vegetables

Ads 09:11

And now a word from one of our sponsors. A big hidden stressor on our health today is something we're probably all staring at right now, blue light. From our phones, our laptops, our TV, our eyes and our circadian rhythm are constantly getting attacked. That's why I started using Bon Charge's blue light blocking products. Let me tell you, they have been a total game-changer. So I'm wearing the Maverick blue light blocking glasses right now, and they even come with their own prescription. So these are prescriptions, and that's what's prevented me from using blue light blocking glasses in the past because I wear prescription glasses for reading, and so I need a pair of blue light blocking glasses that are prescription.

Bon Charge's science-backed blue light blocking products allow you to mimic ancestral light sources from night to day. It is super important to use these products when the sun goes down, because when you are looking at blue light, you're basically communicating to your body that you're staring at the sun and you release cortisol and you suppress melatonin production so you don't sleep as well or it takes you longer to go to sleep, and that's just a disaster for your health long term. Trust me, you will feel the difference when you start using these blue light black and glasses from Bon Charge. And right now, my listeners will get 15% off when you order from boncharge.com and use my exclusive promo code, Wendy at checkout. The discount applies sitewide on all of their amazing products. So that's boncharge.com. You also get free shipping and a 12-month warranty as well. So go

now and get this exclusive offer. That's boncharge.com with promo code Wendy to get 15% off.

Dr. Wendy Myers

What it does is unbelievable.

Catharine Arnston

That's grocery carts of food right here

Dr. Wendy Myers

And it's totally believable 'cause when you take this, you're not hungry. I notice after a couple days when I don't take it, I'm snacky, I'm thinking about food. You have the food noise and I'm wanting to snack and as long as I take these. I'm good 'cause your body isn't seeking nutrition.

Catharine Arnston

That's right. You got over 30 vitamins and minerals. All the electrolytes. 18 of the 20 aminos, including the nine your body can't make. And most people, and we'll talk about the two different algae, but most people find the spirulina really chewy because it has very high protein and very high in essential fatty acids. So they swallow them, but whether you swallow them or chew them, you get the same benefit. It gets into your body a little faster if you chew them. Most people do like the chlorella 'cause it's much drier, it has lower protein, not as much as central fatty acids, but it is a godsend. I am so excited and eager to get the knowledge about algae out to the world, because in Asia, everybody takes it.

They don't take supplements in Japan, they only take chlorella algae. Supplements do help a little bit, but you're better off getting your nutrients from food. But as we know, Wendy, our food supply is so damaged. Even if you are eating vegetables, and I'm writing a book about this, the nutrition just isn't there anymore. Our soils are so damaged, there's no minerals in the soils for the vegetables to pull up. So

you're getting fiber and calories, but not nutrition. So, that's why spirulina fills all those nutritional gaps and satisfies your hunger. And then the other problem is, as you know, and detox is your biggie, that we are swimming in toxins.

The average adult now has 700 toxins in them. Their babies are born with over 200 toxins in their umbilical cords. I mean, this is a disaster. And so as we'll talk about chlorella, it pulls out toxins, chelates them, which you know, is a different tech or pathway than what spirulina can do. So, that's why I say spirulina is your nutritional insurance and chlorella is your health insurance 'cause you've gotta get those toxins out. It's causing a lot of interference with cell communication, absorption, operation functionality, metabolic health issues. It's all partly because of the toxins that are in our bodies.

Dr. Wendy Myers

And in our brain too. Can you compare the algae to plant-based foods or like greens powders? 'cause I know a lot of people take those.

Catharine Arnston

Well, I'm not a big fan of powders and there's a couple of reasons I won't mention any brands, but a lot of them pound on their chest about the fact they have 70 or 50 ingredients. Well, if there's that many ingredients in the powder, you're probably not getting a lot of anything, number one. Also it just opens the door to any kind of food allergies because with that many ingredients. There's a greater likelihood there's something that's gonna cause some problem for you. But the biggest one for me is that they have to use high heat to mix these powders.

Heat deactivates and deactivates pigments. Anything over 114 degrees deactivates enzymes, and there are some very important nutrients found in spirulina and chlorella. And by the way, for most powders, the first two ingredients are spirulina and chlorella, and usually the order in which the item is listed in the nutritional chart indicates the highest concentration. So whatever's first, that's what you get the most of. The second ingredient is the second most, and the third. So even

though they have spirulina and chlorella, if they mix them with high heat, and most of 'em do, you're missing a lot of active ingredients.

The way I describe it, it's like getting a great deal on a car and you lift the hood and there's no engine. So yes, you're getting a great deal, but it doesn't really perform better at all. Frankly, with algae, our spirulina and chlorella tablets, we have one ingredient. That's it. It's either a hundred percent spirulina or a hundred percent chlorella. Although, I will stand corrected. We do have a product called Vitality Bits, which blends the two algae. But, basically it's one ingredient. That's why it's food has one ingredient. An orange has one ingredient, a carrot has one ingredient, algae has one ingredient.

We stand apart from most other Australian chlorella, algae, tablet companies because they generally grow theirs in China or India, and they're lower price and because they're lower priced. They have to get to market quickly so they cut corners. They use heat 'cause then they can get into production and get the stuff.

Dr. Wendy Myers

What are they using?

Catharine Arnston

High heat, and again, high heat deactivates enzymes. We've never used high heat, which is why ours work so well. Even if you double up the quantity on some of those other lower price, lower quality algae tablets, you're simply not gonna get the functionality. One of the nutrients that I'd like to talk about, which protects your mitochondria is an antioxidant called superoxide dismutase, also known as SOD, but it's also an enzyme.

Once it's heated above 114 degrees, it's deactivated. It doesn't work. Same with the pigments where I can talk about some of the healing properties of some of the pigments. Spirulina is known as a blue green algae because it has two pigments. The green one, which most people are familiar with, is chlorophyll, but there is a second pigment in spirulina, a blue pigment called phycocyanin. It acts as an

antioxidant, it acts as an enzyme, and it's proven to kill cancer cells. I can walk you through the pathway, but that's also deactivated by high heat. So why would you want something that's got 30% of the efficacy when you can have something that's got a hundred percent of the efficacy, so you could get frozen or fresh spirulina, and it would work just as well as ours, because of course, neither of those have been exposed to high heat.

But you can't avoid the flavor. They expire quickly. They're difficult to travel with. These are so easy to travel with. We also have them in little pouches. There's like 30 pouches, 30 tablets in a pouch. When people travel, they throw these in their handbag, their gym bag, their travel bag. You've got lunch right there down the hatch. So you don't have to count them out or anything. We know that it works. We have athletes, we feed NHL Teams, NFL teams because they use them for focus on the field and, hey, we're playing in the field of life, so we need focus too. And that's what spirulina does for you.

Dr. Wendy Myers

And yours is a hundred percent organic too.

Catharine Arnston

Well, it's grown organically. We're not allowed to put the USDA symbol on. We've asked the companies that grow it for us. If we could go through the process, we would pass the process. But this is grown in Taiwan, a completely different country. The headache is just too much for them, so they won't, but I will tell you, Wendy, I am planning to grow to build an algae industry, agricultural sea in America, in Florida, because Taiwan is the gold standard for high quality algae. That's where we grow ours. Florida has exactly the same climate.

I drew a line across the globe to see where it would get us, and boom, Florida, anywhere in Florida. So that's my long-term goal. It might take me another five years. I have to buy the land and get all the processes, but this should be grown here. My other goal, by the way, is to get algae on the food pyramid. We know it was recently revised. They flipped it, which is a good start. But, so now protein

and vegetables are your number one as they should be, forget that grain stuff. But algae has the highest protein in the world. It deserves to be on the food pyramid. It's a food and that it also behaves like a vegetable, but doesn't have the downside of vegetables, which I'm sure you know of some toxins. I'm sure you're well aware of things like lectins and oxalates, which are found in things like kale and spinach and almonds, which cause punctures. There's a sharp protein so they can puncture your stomach lining and cause leaky gut, which then can lead to autoimmune.

But algae doesn't have any lectins or oxalates 'cause plants develop those to protect themselves from predators and bugs. They do the same thing to their stomachs too. But algae came from the ocean, so it's not a land plant. It's never had to develop lectins and oxalates. So that's why I tell carnivores, Hey, you can get all the benefits out of vegetables without a diet when you take algae. Chlorella is the one that spirulina has the highest protein, but chlorella has the highest chlorophyll and chlorophyll has the virtually the same chemical composition as your hemoglobin. So not only does chlorophyll kill bacteria, the only difference by the way, between the two of them is that your blood has an iron atom in the middle and chlorophyll has a magnesium.

But otherwise they're virtually identical. So chlorophyll kills bacteria anywhere in your mouth, your colon, but it also builds your blood. When you have healthier blood, you're gonna have a healthier brain, healthier body, healthier digestion. It's amazing. But we don't have enough chlorophyll in any of our plants anymore because our soils are so ruined

Ads 20:58

Now a word for one of our sponsors. So I'm a huge, huge fan of Tru Energy Skincare. This is a bioenergetic skincare line that I've been using for almost two years now, and it's what I use exclusively. It's so good. They have a new product out called the Bio Adaptive Hydration Oil. This is really, really key for protecting your skin from dry winter weather because when you have cold weather plus wind, plus indoor heating that's gonna equal dry, irritated skin. So hydration is really, really key to protect your skin barrier and, you know, preserve your skin.

Why does this matter? It's because dehydrated skin can look dull, tight, more fine lines and wrinkles. Supporting your skin during winter helps it stay resilient and healthy. Like I mentioned, I love Tru Energy Skincare and they have this bio-adaptive formulation designed to boost hydration and nourish the skin. It's a bioactive nourishing skin oil, and so it's infused with frequencies. There are dozens and dozens of frequencies imprinted on their energy-optimized blue bead that's in all of their products. It's actually imprinted not with hundreds, with thousands of frequencies to support cellular repair, improve collagen production, and increase regeneration of your skin.

This is what I'm using at 53 to get the best skin that I can possibly get. This is one of my secret weapons that I personally use. This bio-adaptive hydration oil uses nutrient-rich skin-supportive and clean ingredients as well. All you do is add one to two drops to your face cream or Tru Energy products like their serums or their lotion, and it just increases that hydration. I also use it 'cause I do face yoga every night. I use hydration oil. I put it all over my skin and I'll do a massage and I'll do guha and other things. It's part of my nightly routine. So there are a lot of different uses for it, including increasing the hydration and the effectiveness of the products you already have. Try it for yourself. Go to trytruenergy.com/wendy5

Dr. Wendy Myers

Yeah, and that's why it's such a perfect food. It's so important to get this algae every day on your diet because it's shocking how little nutrition our food has. There's no incentive for farmers to remineralize the soil, especially the industrial crops. The soil is just dead.

Catharine Arnston

It's absolutely dead. You're right. And shame on us. Here's the other thing. It's not just the crops that are being harvested for us to consume. Apparently 90% of all agriculture, which tends to be soy and corn and some wheat, 90% is grown for animal feed. And that's all GMO. So unless you are grass-raised, grassed-finished animal protein you are taking in the same glyphosate that you would've if you ate traditional vegetables. It's so sad 'cause when I go out to restaurants, I almost never

order a salad anymore because it's not gonna be organic. So, instead of a salad dressing, you're getting glyphosate dressing.

We have to start being very offensive and defensive with our health because, if you aren't, you breathe in all these pesticides and heavy metals and eat them and they're on your cosmetics. This is a chapter in the book that I'm writing right now called Love Your Health To Bits With Algae. It'll come out in September. But, some people just aren't aware of the fact that we are surrounded by all these toxins and apparently 75% of the food that's consumed in America, hopefully not, probably not your listeners. 'cause I know your listeners are much more intelligent. 75% are ultra processed foods.

Not only are you not getting nutrition, you're poisoning yourself with all these chemicals that have been created by these foods, especially snack food companies and packaged food companies know what to do to make you want to eat more of it. It's devious. You really have to protect yourself and have a strategy. You really have to have a strategy these days. You can't just eat, you have to have a strategy for your consumption patterns and for your family or we're gonna just keep going down this downhill spiral, which is not good.

Dr. Wendy Myers

Can you talk about algae and how it feeds the mitochondria and helps to produce cellular energy? I think that's really pivotal. I've heard you talk about that before and that's what everyone's complaint is, that they're tired, they don't have enough energy. Can you talk about how all algae solves that problem?

Catharine Arnston

Well, there's a couple things that happen. As we get older, our mitochondria get damaged and die. The analogy I make with the mitochondria is to think of them as you would the lights in a building. If you have a power outage or your lights just go out, you can't very well do any work because it's dark. So your mitochondria are the same way, but they are more than just your lights. They are also your power source. So protecting them is critical because they generate this thing called

cellular energy, also known as ATP. And if you're thinking that cellular energy is just something you need to run to the grocery store or have a great workout, let me correct you on that. You need cellular energy for everything, for blinking your eyes, for neurotransmitters to work for your lymphatic system, digestion, your heart to beat and your lungs to fill. Everything requires cellular energy. And here's the thing, your body can't store it. So as it's made, it is being deployed at the moment.

As you get older, your mitochondria get damaged and die for a couple of reasons. One is this overload of toxins that are interfering with the cell communication, they lodge into the cell membrane. And so things like glutathione, which are part of the detox process in the mitochondria, start to get diminished 'cause they can't get in. It's like someone's still in your parking spot, can't bring your well park when someone's got your parking spot. As you get older, what happens is your body starts slowing down the production of certain protective nutrients. We all know that once we hit menopause, we stop getting estrogen.

Estrogen is a hormone, but it acts as an antioxidant in your mitochondria. We also know that as we get older, our melatonin levels drop, which make it difficult to sleep. And when you sleep, that's when you repair. So if you're not sleeping, you're not repairing, which causes your health to slide even further. But there's this other antioxidant most people are not familiar with called superoxide dismutase, which your body also makes for you but slows down the production as you get older. Now, what does this stuff do? Well, we've all heard of antioxidants and we know that they are able to neutralize free radicals 'cause they have extra electrons that they donate to a molecule that has an unpaired electron, which will steal an electron from another molecule to balance itself out.

These are called free radicals, but if there are antioxidants in the neighborhood, the antioxidants will donate an extra electron to neutralize that free radical. And so we know that things like blueberries and there's vitamin C and vitamin E. These are all wonderful antioxidants. Now the problem is your mitochondria are the only cell in your body with a second membrane. All of our cells have what's called a lipid membrane, which is a fancy word for fat, and the mitochondria have that as well. But it also has a second inner membrane that's left over from the very early days, 4

billion years ago when it was a cyanobacteria that first formed and released oxygen on earth and then also became your mitochondria.

So this inner membrane, the reason why it's important to know about it is it prevents most antioxidants from getting in. But the problem is the production of that cellular energy known as ATP, which we all have to have to stay alive. There's a byproduct, it's free radicals, and it's a very particular free radical called superoxide, which is particularly damaging. Now, as I mentioned, your body produces an antioxidant called superoxide dismutase, which means it mutes. It's like a light diminishes, and what it does is it takes this free radical that's only produced in the mitochondria and converts it to water and oxygen, so it protects the mitochondria. The way I describe it is that it is actually a big golf umbrella.

If you get caught in a rainstorm, whether you're golfing or shopping, and you pop up one of those big golf umbrellas, you don't stop the rain, but you stop getting wet. Superoxide dismutase works the same way. It never stops the rain of free radicals 'cause they're a natural byproduct of ATP, but it converts them into water and oxygen. So it's like a big golf umbrella. Now this is working for you from the moment you're born till about 40. Then about once you hit 40, like a lot of those other things in your body, the melatonin, the estrogen, which start to drop, so does the production of this big golf umbrella called Superoxide Dismutase (SOD).

And so now the protection isn't as great as what you would get from a big golf umbrella. Now it's like one of those city totes. So now a few free radicals are escaping. They're hitting the mitochondria, they're getting damaged, they're dying. And then by the time you get 50, you have even less of it. So it's more like a cocktail umbrella. So now your mitochondria are getting damaged and dying. It's worse than that because the thing that actually makes the cellular energy in the mitochondria is something called the electron transport chain. If you've ever seen a relay race where you have a runner and they have a baton, they pass the baton to the next runner, and then that runner passes it to the next baton runner and they try to cross the finish line first and win the prize.

Well, the way that your energy is actually created is very similar except instead of a runner, you have these proteins and instead of a baton you have electrons. So they

pass the electron from one to the next. And when they do that, it also spits off something called a proton. The proton goes into a special area of the mitochondria where it becomes more acidic and just like a battery, if you have any kind of toy or device that requires batteries, you see there's a positive and a negative on the battery, and that's to 'cause you have to have a flow of energy from one to the next to fuel the toy or the device.

Now, if you put your battery in upside down, it's not gonna work 'cause you have to have that differential in the right proportion, in the right space. Same with the mitochondria, because when you have too many free radicals, they damage that process. So now those protons can't be objective, the electrons can't be passed along. Your body is not able to produce energy through this thing called the electron transport chain. It starts to get too many free radicals being released, which increases the inflammation, increasing the damage. And oh, by the way, your body's so intelligent. It goes SOS. This isn't working for me.

You got too many free radicals. I'm shutting down your electron transport chain. Don't worry. I have a backup plan. It's called glycolysis. Glycolysis, which is the secondary process of generating energy. You get two ATP molecules compared to, I think it's 32, through the regular process. Oh, and by the way, this is the process generating the energy process that cancer cells favor is glycolysis. So your body's still making energy for you, but this is why you are fatigued. You're only getting 10% of the energy, 'cause you're getting two instead because your whole electron transport chain is damaged. The analogy I like to give to people is we have a favorite highway that we take.

I used to live in Boston, so there was a highway I would take from Boston, straight shot to New York. It was four lanes. It was an easy ride. But recently Boston just got a big snowfall. And so the highways were closed, there were car accidents, there were hydro lines crossing. So anybody who wanted to go from Boston to New York had to take the side roads, had to take the back roads, which take twice as long are very uncomfortable. You eventually get to where you need to go, but it's not a nice ride. That's what happens when your electron transport chain is so damaged that your body comes up with this alternate route, which is called glycolysis, but it takes a long time.

You don't feel very good, and if you can't get your electron transport chain working again, you're stuck. Algae, especially spirulina, has the highest concentration of this stuff called Superoxide Dismutase, which your body needs to convert the free radicals into harmless water so the mitochondria can be protected. They can start growing back. And by the way, a byproduct of this conversion of the free radical is oxygen and water. This gets us back to the alkaline story because your body, your cells need, your mitochondria need oxygen and water in the cells, oxygen is the last step for converting into ATP. And if it's not there, you don't get ATP.

We're seeing the free radicals removed and being converted into oxygen water. The ATP can start being produced again. The electron transport chain can start working again. It also has a very high concentration of glutathione, which is an antioxidant, which also helps convert the oxygen and water 'cause there's also an intermediary step for hydrogen peroxide, which requires glutathione and manganese to convert it into the oxygen water. So, we can get your highway back working again. We can get your whole cell structure at the mitochondria level, functioning optimally again.

This is done because you can't get more super oxygen disease, not only is the SID disease in the spirulina, it's about two thirds less in the chlorella. So the chlorella still works, but spirulina is my go-to. It gets absorbed instantly because spirulina is a bacteria that has no wall, so it gets absorbed instantly due to it in minutes if you swallow it. So all the super oxidase can get into the mitochondria and get the electron transfer chain working again, keep the cell alkaline, get back the oxygen so that you can have the rate limiting step in the production of ATP. You can switch back out of glycolysis and into the regular ATP production.

When you have more mitochondria functioning, your lights start coming back on your work, especially in your brain. Your brain has the most mitochondria. You have 2 million mitochondria per neurotransmitter in your brain, the next highest is women's eggs. And after that, your heart, and after that your muscles. So the places that require high energy have high concentration of mitochondria. And this is where people have great problems as they get older. They get brain fog, they get fatigue, they have weight gain. All of this is ultimately related to damage to mitochondria. It's mitochondrial dysfunction.

We all know that inflammation is so damaging. The inflammation is in the mitochondria. So I thought, well, what's causing the inflammation? I went a little deeper into the story and found out it was the damaged electron transport chain. It's a little bit more complicated than that but that's basically why the spirulina is so helpful to getting your body and your health back. We go right to the root cause, which is that electron transport chain, which then unfolds to help build back the your mitochondria,

Ads 38:35

Are you taking collagen supplements? Well, check this out. Our friends at Organifi have sourced the best collagen on the planet, and you can get it with 20% off savings today, too. So, what is collagen? It's the most abundant protein in our body. It's everywhere. It's in your muscles, joints, hair, skin, fingernails, everywhere. It's one of the fundamental building blocks of life. Your body uses collagen constantly to keep itself refreshed and repaired. But as you get older, especially as women who are going into menopause, you can lose 30% of your collagen within the first five years of menopause, and that starts in perimenopause as well. Your body just stops making as much of it, and you start losing it, especially as your estrogen levels come down. That's why consuming collagen is such a great idea every single day. It gives your body a fresh supply to keep working at its best.

It's not only good for your hair, skin, and nails, but it helps to support your gut and metabolic health, immune system, cardiovascular strength, and all of your muscles and moving parts too. Collagen is nothing new. It's one of the oldest supplements out there. Collagen supplements have been around for quite a while now. But what makes Organifi so special is it's all about the quality. The non-organic collagen scare 16 me. They're really problematic because they can be full of glyphosate, pesticides and other chemicals that you do not wanna be taking on a daily basis. Not all collagens are the same. It can come from many different sources and the source can drastically impact its potency and effectiveness as well.

Some manufacturers just go with the cheapest stuff that they can find and then add fillers and artificial flavors and they still charge you a lot of money for that. Organifi always goes the extra mile to ensure their quality is the best. They blend

five collagen types from four different sources, and they taste and test until it's perfect. And then they go even further to test for things like glyphosate residue and other sneaky toxins that can get into the mix. After passing through all of these goalposts, it finally gets the Organifi seal of approval so you can rest assured it's the highest quality and non-toxic. I love that this company is a company that I can trust that their products will be safe and effective exactly as they say they will be.

In the supplement world these days, that kind of honesty and transparency is getting harder to come by. So, if you've never tried collagen, now is a great time to start. And if you're already taking it, now is a great time to switch to a better brand. Upgrade what you're doing right now so you and your entire body is gonna love Organifi Collagen. It is something that I take on a daily basis. It's been a part of my supplement routine for the past five years, since I went into menopause, and so I can't recommend it highly enough. Now let's talk about saving you some cash as well. Here's what you do. Go to organifi.com/myersdetox and put in coupon code Myers detox to get 20% off. You'll save an extra 20% off by putting in my special coupon code Myers detox. So, like I said, collagen's one of those things that I take every single day. It's one of the most important parts of my anti-aging protocol, the things I'm doing to fight off the clock. So for me, taking clean collagen is really important. It's hard to find, so I highly, highly recommend Organifi collagen. And collagen's, nothing new. It's. One of the oldest supplements out there.

Dr. Wendy Myers

That's obviously gonna help from a performance standpoint. For athletes or people that are just doing strength training, endurance and recovery, how does the algae exactly support muscle efficiency and repair and oxygen utilization?

Catharine Arnston

Once you get the electron transport chain working, everything works better because you have access to more energy. You need more energy if you're an athlete, for sure. I'll give you one little snippet on this, a little bit more deep dive on the science. So remember I said there's that electron transport chain and they kind of work like a relay race and there's proteins passing electrons from one another

instead of a runner passing a baton. What I didn't mention is there's two little helper molecules in that process. One that people are probably familiar with is something called coq 10, and the other one they're probably never heard of, called cytochrome C. Now the cytochrome C molecule in a healthy cell, the blue pigment that's found in spirulina speeds up that cytochrome C molecule.

I say it's like having a Ferrari in your electronic transport chain. This is one of the reasons why spirulina gives you energy is because of the blue pigment speeding up that cytochrome C molecule. Of course, there's no blue pigment in chlorella, which is why Chlorella does not give you energy. Now here's another interesting thing. If you have a cancerous or a senescent cell, which is a cell that is subdivided so many times that it's actually inflammatory. It's full of toxins. It doesn't behave well and you really don't want them, and we have more of them as we get older. But in the senescent cell or a cancer cell, the blue phycocyanin detects that it's an unhealthy cell.

Instead of speeding up the cytochrome C molecule, it ejects it, which triggers something called capped, which triggers something called apoptosis, which is healthy cell death. Cancer cells cannot go through this process called apoptosis. So the blue pigment, 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. If you have a healthy cell, it will speed up the production of ATP for you with that cytochrome C molecule. And if you have an unhealthy cell, it kills it. How amazing is that? That's mother nature at work for us. By the way, a lot of the chemotherapy companies, they put blue hypocyanin in their cancer treatments now because they know that's what it does.

And so they tell whether it's working or not by measuring how much cytochrome C is in your plasma. Because if there's a lot, they know that a lot of it's been injected and caused the cell death of the cancer, just to show you how intelligent Mother nature is. Another little tidbit, this blue phycocyanin, and this blue pigment is a water-based pigment. The reason why that's important is 'cause a lot of its benefits are at the blood and the cellular vascular level. One of the other cool things is that it has properties known as anti-angiogenesis, which is the creation of blood vessels. Anti-angiogenesis is the prevention of blood vessels.

Cancer cells are notorious for basically hijacking your blood vessels to feed the cancer or the tumor. So the blue pigment in here prevents that. It's proven in science. It's called anti-angiogenesis. The blue pigment in here is PR is a water-based pigment. It has all these features. Now interestingly, that other little helper molecule called coq 10 is a fat based pigment. And guess what? The only pigment in chlorella is chlorophyll and it is a fat based pigment. How beautiful is that and why is that an important thing to know? Your cells are made of lipids. You need things like Omega-3 and Vitamin D and vitamin A, 'cause those are healthy fats. Well, as long as your chlorophyll hasn't been heated, because heat will deactivate the pigments, this will act as like an Omega-3.

It heals the cell walls because it's a fat-based pigment. And here's another little tidbit. If you take chlorophyll at the same time you're having a red light device or you're outside, it recycles the coq 10 molecule. So it goes from ubiquinone to Ubiquinol, which one is pro-inflammatory, then it comes inflammatory. This will kick it back into being anti-inflammatory. So it just keeps recycling, amazing, right? Red light and chlorophyll will give you all the coq 10 that you need. So again, it reduces inflammation, it speeds up your ATP production that heals the mitochondria. All this happens without you even knowing.

But the problem is, we aren't getting the nutrients that we need to facilitate all of this intelligence that's already at the cellular level. Once you start giving your body, I say health is really quite simple. We live in a very complex world, but here's the two things. Give your body what it needs and pull out what it doesn't.

Ads 47:48

Let me ask you something a little bit personal. How do you get yourself out of a bad mood? It can be hard, really, really hard, and it only gets harder the longer that you're in that space. That's why I'm a big fan of today's podcast sponsor Organifi. They made an amazing product called Happy Drops, and they're little gummies that are super tasty and they can help make your bad moods better and your good moods great. I'm sure I'm not telling you anything new when I say the world is really stressed out right now. You can see it everywhere. Stress and mood related visits to the doctor's office are skyrocketing along with various prescriptions to

match. And so if you are anything like me, you're looking for a safe, natural approach to rebalancing your happiness and your stress chemicals without worrying about the side effects.

Well, Organifi has given us exactly that. They're called Happy Drops, and they're my favorite new supplement. These yummy little lemon gummies are made with ginger, with gouda cola, and passion flour, all of which are shown to have positive effects on mood and emotional wellbeing. Plus, they have a real powerhouse ingredient, which is saffron. So why is that so cool? The compounds in saffron are shown to help your brain modulate its levels of serotonin. Serotonin's one of your happy chemicals and saffron helps your brain enjoy it longer. Saffron also relaxes you. There's many cultures around the world that drink saffron tea before they go to bed 'cause it helps relax them and helps 'em go to sleep. Saffron also contains antioxidant properties, which can help you protect your brain from oxidative stress. That's great for detox. Best of all, there aren't any nasty side effects. There aren't any bad ingredients and it's safe to use every single day.

Saffron's traditionally very challenging to find in the supplement world. It's difficult to plant and to farm. It's even harder to harvest, and it's one of the most expensive ingredients on the planet. But now thanks to the super food geniuses at Organifi, we can all enjoy a real dose of real mood-lifting organic saffron for less than a dollar a day. I'm excited for you to try them. I think that everyone should. I love their happy drops. Just go to organifi.com/myersdetox and get your happy drops today. When you use my discount code Myers Detox at checkout, you're gonna save an extra 20% off. Again, that's organifi.com/myersdetox.

I want you to go out and try Happy Drops today. Like I said, I love them. I've been taking them on a regular basis to help me to go to sleep at night, to help me kind of relax and get in the mood. You've got nothing to lose but your frown.

Dr. Wendy Myers

Chlorella is the number one supplement in Japan for a reason and it's really well known for detoxification as well. Can you talk about how Chlorella detoxes the body?

Catharine Arnston

It's interesting that you mention that because remember the Fukushima disaster that happened in Japan about eight or nine years ago, within 24 hours, the global supply of chlorella was bought up by everybody in Japan because it's the only thing that will pull out heavy metals and radiation. By the way, the entire algae industry started in Japan and it was chlorella. And the reason why it started is because after the World War, after the Hiroshima bomb, they fed the Japanese chlorella. The Americans gave it to them. And the people that got it not only got the protein from it, they healed from the radiation.

So the Rockefeller Institute started trying to grow chlorella in America, but of course they only gave it a year. That was back in 1948 and, and 1949. So the Japanese government, because they saw how it had healed their people, they said, well, we're gonna try growing this stuff. And it took them 10 years to figure out how to grow chlorella for mass consumption 'cause it's a very difficult crop to grow. By the sixties it was available for all of Japan. They use it every single day. By the way, I point out that the Japanese have the best longevity, lowest cancer rates, lowest obesity rates, and great skin and hair.

Now, it's not just the chlorella, I realize that. However, it does contribute a great deal to it. They do not take supplements. They would not imagine leaving their house without taking chlorella. It's their lifeline for any kind of detoxing of heavy metals, including radiation. So why should the Japanese be the only ones benefiting from it? When I first started the company, gosh, 17 years ago, I met the original company that grew chlorella. It's called Sun Chlorella, a wonderful company. I spoke to them and I said, have you ever thought of helping Americans understand chlorella?

Their packaging was Asian. It looked like it'd have worm guts. It was so unattractive. It was clearly for the Japanese market, it had red and green packaging. And they said, no, we've done it this way in Japan for 50 years. This is the way we're always gonna do it. In America, you have to educate people. You have to help them along to understand what this is, take the weirdness away from it, and give them some science and some basic facts. I designed all our packaging and I

did it to take the weirdness away from it. I designed the green one 'cause it's chlorella is a plant, and this blue one is spirulina. It came from the ocean.

It's not a plant. So I really put a lot of thought into the way I designed it. I've recorded 300 videos. They're only a minute and a half teaching people, spirulina for brain health, spirulina for mitochondria health, chlorella for detox, chlorella for sleep. By the way, it does help you sleep because it has the highest tryptophan in the world, which is a precursor to melatonin, which helps you sleep. Chlorella also has high tryptophan, which is also a precursor to serotonin, which is your happy neurotransmitter. 80% of it is made in your gut and actually used in your gut, but it has the effect on your brain. So you see how it's all connected, everything's connected.

Chlorella is very much a gut health detoxing algae. Spirulina is very much a nourishing, energizing, brain health algae. And of course, the brain and the gut are joined by something called the vagus nerve. So, it's like mom and dad. They're constantly in contact with one another. They're, they're the yin and the yang, so beautifully, completely different chores in your body. If you could only choose one, I always start people with spirulina because everybody is short of energy. Everybody's nutritionally deficient. You'll notice the impact within 20 minutes because you just won't be tired anymore, or you just won't be hungry anymore. That's the chlorella because it's a wellness detoxing, helping you prevent being sick.

It's not as obvious that it's going to work. Although I will say one of the things that is obvious is it stimulates bowel movements. These are one of my favorite topics these days because so many people are constipated, right? If you go down to a pharmacy and you see rows and rows of all this stuff just take chlorella before bed. It's a natural way to help stimulate this peristalsis movement. You get up in the morning after a great sleep and you have a nice, as my father used to call, he did his business. Do your business and get it out because what's in there is stuff your body didn't want. I call it the junk in your trunk. It's like having a garbage truck parked there in front of your house. That would be pretty stinky.

We need to move what's in your bowel out of there because if we don't, your blood will circulate around to recirculate the toxins. This is why colon cancer is on the rise. There's so much constipation and we wanna help people get over that. Chlorella is your go-to gut health all the way.

Dr. Wendy Myers

I did not know that about chlorella. That's great. I love the Japan part too. That's good to take at night, obviously.

Catharine Arnston

Yes, you can take it anytime during the day, but definitely take it before bed for the melatonin improvements, the serotonin, and the bowel movements also. Chlorella has something called chlorella growth factor. It speeds up the growth of your own cells. So it's very much a healing attribute. When you are sleeping, when you're deep asleep, that's when your body does the repair and the detox. So having chlorella before bed will facilitate that cleansing, healing property.

Dr. Wendy Myers

Let's talk about what consumers should be looking for in terms of sourcing, purity and nutrient density when it comes to algae. There's a lot of products on the market. I love that yours comes in a tablet. It's so much easier to take. I used to take the Sun Chlorella and I put it in a smoothie and then it makes it this puke green and it just is not very appetizing. I definitely love the ease of taking it in these tiny little tablets. It's very easy.

Catharine Arnston

That's why we did the tablet. With the large bags, they come in canisters or the single servings. So, for a starter amount of either one, we recommend 10 tablets. Spirulina 10 tablets will fill nutritional gaps. To prevent any health condition or to correct one, we really recommend 30. I know that sounds like a lot, but when you see how tiny they are, you could take 10 in the morning and 10 at lunch and 10 at

two o'clock because everyone has that slump at around 3, 2, 3 o'clock. It's usually your cortisol levels dropping.

So it's very easy to get 30. I have way more than that, by the way. I've been taking them that many for 17 years. I turned 70 this year, Wendy seven zero. So it's working for me and I just want everyone to have the same benefit. Same with the chlorella. If you take 10 chlorella, that'll give you the chlorophyll that you're missing for sure and the phytonutrients fiber. That's all good. But for detox benefits, whether it's for pulling out alcohol, lactic acid, if you're an athlete or lead, mercury, radiation, any kind of detox you really do need the 30. The great thing is chlorella tastes pretty good. It's dry, sort of like a soy nut.

I sprinkle sea salt on it, or I have it with pistachio nuts. You could have it with any nut. It could be a great snack. Put it on as a garnish on your salad. It's nice and crunchy. 30 is the therapeutic amounts. 10 would be your starter or entry. For children, you can give them both. You can give them to any age, newborns, children, teenagers, pets, grandparents. For children, we generally suggest one or half one of their age. So if they're six, give them three to six spirulina a day. If they're 10, give them five to 10.

I've had children come to my table at some of these shows who have very healthy parents. This one little girl, I have a video of her. She must have in probably a space of two or five minutes tops, she must have had like a hundred chlorella 'cause she ate it at home all the time. She had the green dripping down from her cheeks and just made me so happy. After about a hundred, I said, I think she's had enough. She was only like 16 months old, so she was like a foot and a half tall. I only mention that because it's food.

So just like you can't have too much salad, you can eat as much as you want and it's great if you're fasting. I do intermittent fasting every day. I take the spirulina mostly for that. So you stay in a facet state, but you're not hungry or tired. How great is that?

Ads 1:00:58

For anyone listening who really wants to detox their body, go to heavymetalsquiz.com. I created a quiz for you. It only takes a couple of seconds and it's based on some lifestyle questions. You can get your toxicity score and get a free video series that answers all of your frequently asked questions about how to detox your body. Check it out at heavymetalsquiz.com

Dr. Wendy Myers

This is what I highly recommend to all my patients. Anyone listening, you want to be taking this algae because as Catharine pointed out, there's so many benefits. I have felt so much better since I started taking it on a pretty much daily basis for the last couple of years. This is a staple. This is like my main source of nutrition. I don't take multivitamins anymore.

Catharine Arnston

Me neither, I don't take anything.

Dr. Wendy Myers

Yeah, that's what I do. I take lots of minerals too, but this is the main thing that I take and it feels so much better than taking synthetic nutrients that are in most multivitamins.

Catharine Arnston

Yes, which we don't absorb. And by the way, I found out almost all synthetic vitamins are acidic, and we're trying to keep our bodies as alkaline as possible. For optimal performance, your blood needs to be 7.34. The scale is from zero to 14. Your cells should be 7.1 or 7.2. So this is the most alkaline food in the world, and you can eliminate multivitamins, fish oil, collagen powder, pro coq 10, 'cause you're getting that recycling. So, it will replace a lot of what you're already buying and give it to you in a form that is food.

We only sell through doctors' offices and our own website. We do third-party lab tests here in the United States. We do all nutritional testing, all the heavy metals, and microtoxins. I have about five different labs. It costs us about \$50,000 a year because we have to give people complete assurance that ours is safe. If you're giving this to your children, you wanna be safe and. I couldn't live without them myself. So, it's really, really great stuff.

Dr. Wendy Myers

Well, Catharine, thanks so much for coming on the show and just illuminating us on all the benefits of algae and how they help us to make energy and help with our metabolism, and just so many other benefits. So thanks for that

Catharine Arnston

We have a discount code for your listeners. The code is Myersdetox, all one word, and we will work on everything. Just come to energybits.com. It's our main website. Use it for bags or single pouches, or if you have multiple people in your family, you empty the tablets into the canister, screw the top back on, and then just shake it out of the canister so you'll have little fingers going in there with goo on them.

Anyways, algae is here. It is gonna save the world. I tell people algae isn't new. It just might be new to you. So, come and learn on our website and grab yourself some products. Thank you, Wendy, so much for allowing me to come back again. I'm a frequent flyer, and it's always so sweet. It's wonderful to see you, and you do such a great job educating people, so I'm very grateful to be here.

Dr. Wendy Myers

Well, thank you so much for coming on. Everyone, thanks so much for tuning into the Myers Detox Podcast. I'm Dr. Wendy Myers, and it's really important to me that I give you all these little pieces of information to help you make those distinctions so you can make the best choices for your health, 'cause you deserve to feel good, and that's what I want for you. So thanks for tuning in every week.

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