Introduction to Dr. Sarah Myhill

Welcome back to the conversation. We have a very special guest today all the way from the UK. Dr. Sarah Myhill, thank you for being here. Welcome. My pleasure. Thank you for having me.

Oh, this is going to be one of our favorite discussions on this summit. Without a doubt, you are a mentor to me and Ari. When we sat down and looked at who we would want to bring on this summit, your name was at the top of the list and, you know, let me introduce you to our audience.

If they don't already know you, but you have a special interest in chronic fatigue syndrome and myalgic encephalitis. And you've written three scientific papers on the role of mitochondria in this disease. And you're an author of multiple prize winning books.

My favorite is Chronic Fatigue Syndrome. It's mitochondria, not hypochondria. Because as somebody who worked for 20 years in the conventional medicine space, I definitely diagnose people with hypochondria in my past.

I know better now, but also what I want to share with our audience as we get going here is they should really be listening to you also because you have had a lot of friction with the medical community and they've tried to cancel you.

Can you talk to a little bit about that? Absolutely. I did in my medical career, my first 20 years was in National Health Service, conventional practice.

And then I realized I didn't have the clinical freedoms I needed to be a good doctor. I went independent in 2000. So I'll be well. He's an independent physician since then.

And my view is that all information should be freely available to everybody. So everything I think or I've had new ideas, I put it up my website where anybody can access it.

Chronic Fatigue, ME, and Mitochondria

And then whenever I see patients I always write to their GP's and tell them what I'm doing. Now other doctors don't like this and I am now the have been endlessly reported to the General Medical Council.

I'm the most investigated doctor in the history of the GMC and one of the funniest comments that came out of the GMC because I invariably do Freedom of Information Act search is to find out what they're thinking.

The GMC adviser, Queen's counsel. Then Mr. Tom Clark commented The problem with the My Hill cases is that all the patients are better and none of them will give witness statements.

So that was the problem. They couldn't nail me for anything. And I've recently so up to Case 38 and the current score is my hill 38 GMC nil. I now have five case against me for advice that I've given for treating COVID patients.

And we know there's now a wealth of evidence that vitamin C is very helpful, that vitamin D is highly protective, the ivermectin is effective, but wearing masks is completely useless.

But I've been told by the GMC that the advice that I'm giving is potentially lethal to patients and it's complete and utter nonsense. These are all things that we know intellectually.

We can buy over the counter. Any vitamin store will stock them. It's it's nonsense. So this is an example of how anybody who goes against the official narrative for recommending treatments for COVID get slated by their

regulatory body.

Right. And here in the United States, for those of you wondering what she's what she's referring to would be synonymous with the American Medical Association and the FDA.

So basically the same powerful organizations in the UK are trying to stop her. So, Dr. Myhill, we are very curious what you have to say and our audience definitely wants to know.

And as I already told you, we should be listening to and following anyone who these big organizations are trying to censor and quiet. This is the exact trail we should be following.

So without further ado, let's get into this interesting conversation now. Can you first off, just unpack for me the whole concept of it's not it's not hypochondria, so that these people that we care for in our practices who come with chronic fatigue and no matter what, you know, we seem to try all these different methods to support them and they still have fatigue and they get labeled as hypochondriacs.

So what's really going on here and I know you have a great analogy to help us understand mitochondria function in the body, so I can't wait for you to unpack all of that.

Okay. Well, the key points to functional medicine, naturopathic medicine or molecular medicine, it doesn't matter what you call it, is to recognize or to work out what the mechanisms are by which that patient has symptoms.

Now we tend to talk about chronic fatigue syndrome and may in the same sentence, but there are actually different pathologies. So the symptom of fatigue, chronic fatigue syndrome, is that all those symptoms which arise when you have poor energy delivery mechanisms in May, you have poor energy delivery mechanisms and inflammation, chronic inflammation that might be driven by chronic infection like Lyme disease and mycoplasma.

It might be allergy or autoimmunity. Real quick, can you talk about me? So Myalgic encephalitis is what Amy is and our audience might not know what that is. Can you tell us everything?

Everybody knows what chronic fatigue syndrome is, but tell us what Emmy is in layman's terms. Me is a clinical picture. It is not a diagnosis. We have to ask the question why?

And in Emmy we have part chronic fatigue syndrome because they're very fatigued. They have poor energy delivery mechanisms. But in addition to that, the immune system is activated, they have inflammation.

Fueling the Body: Keto, Fasting, and Carbohydrate Addiction

And we have to ask, why is the immune system activated? What is driving that inflammation? And it might be chronic infection, it might be an allergy to a food or an inhalant or a chemical.

It might be autoimmunity. But regardless, we always and there are many overlaps between for energy delivery mechanisms and inflammation. But regardless, we always start off with energy delivery mechanisms, because if you can improve energy delivery mechanisms, even if that person has asthma, they'll feel better.

But then you will give the immune system the energy that it needs to deal with a chronic infection. So the two dovetail nicely, but I always start with energy delivery mechanisms and the analogy that I love to use because I get it, my patients get it is the car analogy because you know, our bodies are basically a machine or a complicated machine, but a machine all the same.

And for our car to go, there are four important types. I'm no mechanic, but what I do know is going to have the right fuel in the tank. You know, I've got an old banger out there that runs on diesel, but if I put petrol in it, it won't go.

You've got to have the right fuel in the tank and then you have to have the control engine. And what that engine, what those engines do is they take that fuel and in the presence of oxygen, they burn it to generate energy.

And the engines are called mitochondria and they are common to all life that we know the simple yeast cells. So my dog, those sheep out there, horses, goats, daffodils, grass, they all have exactly the same engine.

It's called mitochondria. And then we have to have those mitochondria then has to has the right control mechanisms and so the mitochondria get the right speed.

We need a thyroid accelerator pedal and the underactive thyroid is very common. And then in response to demand, in response to stress, we need an adrenal gearbox to allow us to move up a gear to cope with the extra demands, which might have been a sabertooth tiger leaping out a primitive woman as she struts in the jungle.

Or it might be me talking to you now, so we have to get less for things in place, and more importantly, we have to do them in a certain in a particular order.

Now, when I first started off in this game, I was pretty, pretty hopeless, actually. I have to say. And I was throwing ideas and patients saying, well, try this, try that, try the other.

And I now know. And of course, what they do is they cherry pick the easy thing, which is understandable. They say, Oh, by a few seconds, I'll take science because that's easy.

But the single most important thing to do is the paleo ketogenic diet. We've got to get the fuel in the tank, right? And our mitochondria, our engines, they like to run on ketones.

And one of the reasons why we're seeing epidemic of fatigue and me is because the Western world fuels its body with sugars and carbohydrates. And the reason we do that is because they're addictive and we eat them in an addictive way.

And I can tell a carbohydrate addict simply by asking, what do you have for breakfast? Because if you have a night's sleep, you wake up in the morning and you've got maximal withdrawal symptoms.

And if it's a glass of grape juice, a bowl of muesli, a piece of toast, then I know that they are a carbohydrate addict. You know, Doctor, my own people always ask me, Laura, what should I eat for breakfast?

And I tell them, Eat dinner for breakfast. And they looked at me like, I'm crazy. And they said, Well, what do you eat? And I said the same thing. I ate for dinner.

I eat meat and vegetables 3 to 4 times a day. That is what I eat. I do not eat the convention or breakfast foods. It's dessert. It would be very rare.

So everyone wrap your mind around the fact that breakfast doesn't have to look like society. Tells us in, you know, in prehistoric times, you know, indigenous cultures, they did not eat porridge for breakfast.

They eat meat and. And many of the time they wouldn't have eaten at all. Or they fasted. Right, exactly. Much. There are many health gains from fasting, from intermittent fasting.

And, you know, we should stick fast and feast whenever I have a difficult question. Should I do this or should I could do that? I always go back to first principles.

I go back to evolutionary biology. What did primitive woman do? Did she get three meals a day? I don't think so. She would have fasted and she would have feasted and in the autumn there would have been a glass of food.

So it would be an excess of fruit, vegetables and fruits and nuts and seeds. And yes, those are carbohydrates. And yes, she would have feasted on them and yes, she would have got fat.

But getting fat, of course, is survival value for the winter. And we can tolerate quite a bit of that. We can tolerate quite a lot of carbohydrates and sugars.

But what happened in primitive times is she ran out of those foods. She ran out of those foods because she didn't have storage facilities, etc.. But those were the reason why she ate those foods and overate those foods and got fat is because they are addictive.

And of course we can eat those foods all the time because we can because of modern agriculture. And so people do and they don't appreciate that that addiction is what make Mason eat and eat and eat.

And they eat foods for reasons of addiction, not because they are they are full of micronutrients. They've got the right oils in them. They've got the right balance of proteins and fats and so on, so forth.

So somebody's going to have so many questions here. So why can you just help our audience understand? And I have two questions. Why are they addictive?

So what's happening in our body, in our brain that makes us want those things? And number two, what do you have to say about the vegan movement, knowing that primitive woman probably was not a vegan?

Well, we know that they're addictive. The reason they're addictive is that's an evolutionary benefit, because it meant that primitive woman and primitive eight and eight got fat.

It's probably the mechanism of addiction is probably because when you eat sugar and carbohydrate, it's you get a high blood sugar. And that in the short term is rocket fuel.

It does give us an energy. It's like having caffeine. It gives us a brief energy hit. But it's the old story. You can't have an apple without a downer.

And and and that's why they are addicted, because you have the upper and then you have blood sugar drops and you want something else and the food. Goes up, must come down.

Whatever goes, put it down. Okay, got it. Got.

Gut Fermentation and Restoring Energy Delivery

And again, veganism is not it is not evolutionary correct food. I understand why people do it for reasons of animal welfare and meat and they they think it's to feed the world.

I'm not sure I agree with that argument, but what I do know is I have a high proportion of vegetarians and vegans in the patients that I see with chronic fatigue syndrome.

And it's not evolutionary, correct? Food is often high in carbohydrates, is often low in fat. And that is not good news for the body. And do they get better if they decide to have some animal product?

More animal protein. Is possible to recover on a vegan diet. It is possible to do a paleo ketogenic vegan diet, but it's really hard work. And one of the problems of people that I see is they haven't got any energy.

And so I'm then asking to put in a huge amount stingy stupidity, genic, vegan diet, and that's an extra dimension of difficulty. So I encourage people to eat animal seeds and most people will eat eggs and many will go on to eat fish as well with eggs and basically get an awful long way.

Oh, good, good. Okay. So just to reorient our audience, we're talking about the for energy delivery mechanisms. And you just covered fuel and now we're going to go on to the mitochondrial engine.

Right. We are going to unpack that so we can do that. We just need to touch on the upper fermenting gut because that, too, needs to be sorted. Now, one just said that said the normal human gut is is the upper gut.

The first 20 odd feet of gut is a sterile digesting carnivorous gut. So the basis of dealing with meat and fat, the

lower gut, the large bowel, the last three, four to about is a fermenting gut to the business of dealing with with fiber is a vegetarian gut.

Now, one of the problems if we eat a high carbohydrate diet is we overwhelm the ability of the upper gut to deal with those sugars and carbohydrates that the the stomach can no longer sterilize the upper got the bacteria and the yeast move in.

And of course, whenever we're eating food, it's covered with bacteria and yeasts. Those bacteria, these then start to ferment and the upper gut becomes a fermenting gut.

Now this goes under lots of names. It's called small bowel, bacterial overgrowth. It's called the Auto Brewery Syndrome. Because if you have yeast fermenting sugar, then you will produce alcohol.

Helicobacter pylori is one such example of an upper gut fermenter, but the point is it doesn't matter what the microbe is, the treatment is the same. So what?

And if you have got an upper cementing gut, it's a disaster. Because when you start taking those expensive vitamins and minerals, you just feed the fermenters, you don't feed yourself.

And in addition to that, the alcohol meant he got ferments to produce a whole heap of toxins like alcohol, D lactate, hydrogen sulfide, aminul compounds and all these poison mitochondria and the business of detoxing in the liver uses a loss of energy. So, so having them actually stand out what that does, it helps to starve out those upper gut fermenters and reduce the amount of fermentation there.

And then we can add in that vitamin C, five grams in the morning iodine I use Lucozade D 15 drops three drop that 50%, three drops at night and both of those contact kill all microbes.

So by dint of doing these very simple things, we sort the act of fermenting. And once you've sorted that, then you can get the goodness inside, then you can get the goodness from the micronutrient supplements which actually we all need.

So that puts us in the starting blocks, as I call it. And so you've got the fuel in the tank, right? And then absolutely, as we move on to the mitochondria now, mitochondria as a set of the engines of the car.

It's something we learn as a medical school. And I learned about this in the 1970s at medical school. Something you you stop the night before on black coffee and and regurgitate something onto the biochemical paper, hoping that you've done enough to pass.

And the reason that we didn't we weren't interested in mitochondria, that is because they they didn't seem to have any clinical application. And we now know mitochondria are involved in almost any Western disease.

You mentioned chronic fatigue, you and Emma, to dementia, heart disease and cancer. So this is something we should all be looking at in order to live life to our full advantage.

But then as you as you point out, I produced three papers in conjunction with Dr. John McLaren, how he did the biochemical tests and Professor Norman Booth at Oxford who wrote up the papers and what those that that that's those papers demonstrating is that those patients with chronic fatigue syndrome who had the worst energy, had the worst mitochondria function and vice versa.

And our third paper demonstrated that when we put in place the regimes to improve mitochondria, then mitochondrial function improved reliably. Well, the important bit about that is we don't need the tests to get well, we just have to put the regimes in place.

So then we have to ask, well, what do our mitochondria engines need to work? Well, obviously they need the fuel in the tank. Well, we've done that. We're on a ketogenic diet.

Mitochondrial Support: Nutrients and Lactic Acid

Then there is some raw materials that are essential for mitochondria, and we measured levels of all these things as part of our mitochondria function tests. And the key elements that we need from well, first of all, magnesium, 300 milligrams a day plus vitamin D, 10,000 IU without vitamin D there you can't absorb magnesium turns on Q10 100 milligrams vitamin B3 niacinamide 1500 milligrams acetyl l-carnitine one gram and possibly de ribose.

And all those nutrients are deficient in a vegetarian diet. And as is obvious why? Because when you eat meat, you're eating a whole bunch of mitochondria.

And in the mitochondria, all the raw materials that we need for our mitochondria. So meat is rich in ketone acid, alkalinity, vitamin B3 and so on. So then mitochondria got the fuel and they've got the right fuel, they've got the raw materials to work.

And I think magnesium is the sparkplug of our engine. I think of co Q10 as the oil of our engine as well. L-Carnitine is the fuel pipe by which ketones get into into into the mitochondria.

And then we have to ask what might be blocking mitochondria and because mitochondrial blockers are common and one of the major blockers is lactic acid.

Now, this might sound rather counterintuitive, but this is very there's a major problem with people fatigue syndromes. If people with fatigue don't pace their activities well, they switching into anaerobic metabolism, that's metabolism without oxygen.

If you slip into metabolism without oxygen, you freeze lactic acid and that inhibits mitochondria. Lactic acid is such a powerful inhibitor, mitochondria, it stops athletes winning gold medals.

So pacing activity is really important in the early stages. And I would say it stops moms from having joy playing with their kids. It stops grandparents from having their weekend, you know, time with their family.

They're spending recovery time. It's it's affecting all of us. Correct? Correct. So, so, so getting the amount of activity in our day. Right. Is really important.

And when people ask me, well, how do I know how much to do? The key is how you feel the next day and you know, I should be tired again today, but I have a good night's sleep and I should be as right as rain tomorrow.

But somebody with a chronic fatigue syndrome will do something and they will pay for it the next day. And if you are paying for your activity the next day with more fatigue, that might persist for some days.

That is pathological. It's like an athlete being a state of chronic overtraining. We know if they're chronically overtrained, their performance diminishes.

They get you know, they do. They get worse. So so controlling lactic acid, not allowing the body to slip into anaerobic metabolism. QUESTION Can you unpack how we end up in anaerobic versus aerobic metabolism?

What is what are what are our viewers doing that's making them anaerobic? Okay. Our engines are a certain size and run as a certain pace, and the most efficient way to generate energy is aerobically through our mitochondrial engines.

But if demands suddenly increase, i.e. a sabertooth tiger leaps out at you, then we start to employ the alternative method of generating energy, which is energy without oxygen, which is anaerobic.

So it gives us a little bit of energy over and above our standard. Another example would be if you've got an athlete running a marathon, for example, he will run these 27 miles in aerobic metabolism, carefully balancing up energy requirements to energy demands.

But for the last 200 meters, the athlete will sprint. They will sprint in order to try to win the race. He will go a little bit faster, but the extra speed will come from anaerobic metabolism.

But when he arrives on the finishing line, it'll fall over because he's got absolutely no energy left whatsoever and they'll take some minutes to recover.

So we don't have sabertooth tigers chasing us now, but we do have the news and we do have traffic and we do have dealing with our kids, you know, at school.

And so is that going to cause the same problem, that same stress? It's possible, yes. I mean, what we do with those stresses is we use adrenal hormones to increase mitochondrial output.

And, of course, is on adrenalin, can increase mitochondrial output, you can double mitochondrial output. But if we got the mitochondrial reserve to deal with that, then all is well.

But if we haven't got the mitochondria deserve, then we will go into anaerobic metabolism. And we all know this is if I will, I can walk up a hill quite well if I run up a hill within a few, you know, 20 seconds, my legs aching and painful and I just have to stop.

And that's lactic acid burn in the muscles. My muscles are going to anaerobic metabolism and I'm getting lactic acid burn. Got it. Okay, thank you. Keep going.

So now is there more to talk about on the mitochondria energy engine or do we don't do we go to control now? Now, guys, the control mechanisms because that's that's the major issues.

And as I say, we have the thyroid accelerator pedal and the adrenal gearbox. Okay. And they are usually I mean, although I do these two in parallel, the the commonest problem by far is that the underactive thyroid that is, as I call it, the accelerator pedal of our car.

And that is a condition which is incredibly badly treated by Western doctors, so much so that it prompted me to produce a book. And I've been very naughty.

I've called it the underactive thyroid. Do it yourself because your doctor won't. And the problems the problems with the doctors is they rely on one single test to diagnose the underactive thyroid, and that's a t h a thyroid stimulating hormone.

And if that's normal, the patient is told there's nothing wrong with you. And the key point to remember about the Andrex side is we diagnose it on blood tests and the clinical picture, which is so important, and there is a characteristic clinical picture of the underactive thyroid that people are not asked about.

Thyroid and Adrenal Control Systems

So for example, obviously if your thyroid is under active, you will have all the symptoms of poor energy delivery mechanisms, fatigue, foggy brain post, exertional fatigue and so on.

But there are some symptoms which are peculiar to the thyroid gland, for example. Very often people are ALS, they go to bed late and they can't wake up until and they can't drop off to sleep until 11, 12, 1:00 in the morning.

And they don't wait till maybe eight, nine, 10:00 in the morning. And that's because adrenal hormones are particularly important for controlling our circadian rhythm.

If you're if your adrenal is if your thyroid gland is underactive, you often retain fluid. So the fight becomes puffy. You look at the tongue, it's often swollen.

You look at the side of the time. You sometimes get teeth marks on their nerve compression symptoms like carpal

tunnel syndrome, possibly sciatica. These are all associated with the underactive underactive thyroid.

And I'll say you don't have to have all of them. So I know there's people listening. Oh, I'm good. I don't have those marks in my tongue or a puffy face.

So these are all just pointers. And another very useful clue is your pulse rate at rest. You know, if you're not a super athlete and most of us are not, then at rest, first thing in the morning, your pulse rate should be between 70 and 75 beats per minute.

If it's consistently, you know, in the sixties or below, that would very much point to the underactive thyroid. And of course, another very useful clinical clue is all these energy delivery mechanism, just like a car going.

Well, if they're going slow, then if your car is going slower than the heat, it doesn't. Come on. It's exactly the same in the body. If all these anti delivery mechanisms are going slow, then you will run cold.

So a cooler temperature first thing in the morning is another very useful guide to the underactive thyroid. And what should it be? It should be 37.0 degrees centigrade.

Okay, so in Fahrenheit, I think we're talking about 98, 90 degrees. And if you're running 96, 97 degrees, correct. Potentially have an underactive thyroid.

That is too cold. And another useful thing is very often people have thinning hair. Hair falls out, loss of the out of the eyebrow, rather dry skin. So these are all useful pointers that there's a thyroid issue.

And if you've got the clinical picture of the thyroid, then we do blood tests to measure the thyroid stimulating hormone, but as importantly, the actual level of the thyroid hormones in the blood free T4 and a free T3.

And the reason to do that is to see if there is biochemical scope for a trial of thyroid hormones. Now, thankfully, we can we don't have to go to a doctor to get these.

One can purchase thyroid gland illness online. And in the back of my book there's a list of all the suppliers in the world. They're not expensive. And the key is to start with a very small dose and build up very slowly.

And the reason we have to go slowly is twofold. Firstly, thyroid hormone is quite long acting. So if you go too quickly, you get bioaccumulation. And secondly, thyroid hormones are not only responsible for how fast our engines go, they're also responsible for the size of the engine, they're responsible for the number of mitochondria.

So as we gradually increase the dose, the mitochondria themselves duplicate to make more mitochondria, which means I'm driving around in a car with a big engine rather than the car with a little engine.

And guess what? I wind up with a big engine. I want to be going around in a Rolls-Royce, you know, not a sure, but so so we have to go slow with the thyroid.

And in parallel with this, I want to look at the adrenal function and again, a feature of a poor adrenal function is if people sound so intolerant of stress when something new comes along, I know I just can't cope with, you know, and it causes great sense of dread or anxiety in me that there might be a demand of my energy which I now I can't fulfill.

So that's a very useful clue and a useful test for adrenal function is an adrenal stress profile. Again, anybody can get this simple test to do on salivary hormone levels, and there are many labs in the States that do that.

And we look at levels of cortisol and DHEA over the 24 hours, and that gives us very useful clinical clues. Okay. This is so easy to understand. I just want to thank you so much for making this so simple for our audience.

I don't think I've ever heard anybody break this down so easily before it's I know everybody's sitting like, what's she

going to say next? What's she going to say next? They're on pins and needles right now.

Okay. So anything else about the are we done talking about control or are we going full into gearbox now? Well, you said the most important bit is the thyroid and the adrenal comes on.

I'll tell you a very common clinical picture that I see all the time, and that is the menopausal woman, because female sex hormones give us false energy.

And when we get to the menopause and the female hormones fade away, that's when the fatigue often cuts in. So that's a very useful clinical clues in the thyroid.

And in parallel with that, when we get to the age of about 60, almost invariably the adrenal gland is malfunctioning and a very useful adrenal hormone, which I recommend because it's very inexpensive and anybody can get it is pregnant alone.

Now, all adrenal hormones start life as cholesterol and then the adrenal gland. Since I'm pregnant from pregnant and then comes DHEA, cortisol and all the sexual.

And so it's the top end. It's also been up the memory hormone. And guess what? As I get older, I want to have a good brain. I want to have a good memory.

So pregnant 50 milligrams is a very good adjunct to have with the thyroid. And with those things in place, you're going to cover 90% of adrenal and thyroid issues.

Is there any concern? Is there anyone who should not take pregnant alone or can everyone take a safe dose of this? Anyone watching right now? Can they just go get some pregnant alone and start it?

Or is there anyone who we should not. Know is an extremely safe thing to do? But young people is unusual. They have adrenal fatigue under the age of 40.

You'd have to have very sick somebody be very sick for a long time for adrenal glands, pack up at that age. But by the time you get to about 60 and over then we've probably all got an element of adrenal fatigue and pregnant and is very useful.

And the two herbs that are very particularly helpful to the adrenal gland are ashwagandha 1 to 4 grams a day, or ginseng may be 1 to 2 grams a day. And very often people find those helpful and they work through their effects on the adrenal gland. Okay, excellent.

Okay. So many questions still right now. We've all heard the term adrenal fatigue. I've definitely talked to many doctors who say that's kind of a mislabeled thing.

It's a it's a mitochondria problem, not adrenal fatigue. And then, of course, the Western medicine world says adrenal fatigue doesn't exist. So can you help us shed light on all this semantics of what we call this and why Western medicine says it's a bunch of bunk, it doesn't exist.

And what's really happening here? Well, if you look at life from the point of view of Western medicine and big pharma, the last thing they want, a healthy people, you know, the big farmer's mantra is a patient cured is a customer lost.

So the last thing they want is people with healthy mitochondria, with healthy thyroid glands, and with healthy adrenal glands because those people don't get cancer and heart disease and dementia.

And that's where Big Pharma makes all its money. So of course they're going to poo poo all this stuff. But what we are talking about was us functional docs that talk about has a solid route in science and this was all established by hand Seely, a biochemist working in the 1940s, in the 1950s, who who wrote a wonderful book called The Stress of

Life.

And he was looking at the adrenal glands in experimental animals, rats, and he was stressing the rats. And when he stressed the rats and sacrifice and you could see the adrenal glands enlarged when he stressed the rats and then gave him a break, he could see the adrenal glands had decreased to their normal size when he stressed them unremittingly without any break at all.

The adrenal gland enlarged in large part, and then it faded away and shrunk and the animals died.

Adrenal Fatigue, Stress, and Recovery

And that was the first solid pathophysiological evidence that adrenal fatigue is a very real phenomenon, but it's been denied by the conventional doctors because they don't want healthy patients.

Thank you. Okay. Anything else we want to teach before we move on to just grab bag of topics? Anything else you want to teach about mitochondria and resolving this issue for people?

Because I think you have really created a very clear pathway of how our audience can support themselves with their mitochondria. I don't think I can answer. It's very simple.

You know, I don't hate it. I love to talk in a language that people understand. I love to keep things simple and plain so people don't get lost because it's so easy to throw. I know you've got to do this detox, easy water and complicate things.

I like to keep the roadmap simple. I'm a great fan of the the K is the kiss principle. Keep it simple, sweetheart, which was the mantra of the American GIs in the last war and the basic things done really well get you a long way.

And these basic things don't just apply to people with fatigue syndromes. They apply to normal sleep, with normal levels of energy who want to live their life to its full potential.

They all surprise anybody with cancer, heart disease or dementia because improve energy delivery mechanisms and you are going to reverse that pathology.

So keep it really simple. Just get on with it. Do the wretched diet and and feel the benefits for yourself. I mean, I see I do lots of doctors training for doctors and nutritional therapies and the like.

And I say, C'mon, you must do these regimes yourself, because if you if you can't do them, there's no hope of you empowering your patients to do them.

And it also means you learn the tricks of the trade. That's where things are difficult. What are the nice things to eat? I mean, I run regular eco med weekends here for my doctor friends and for anybody who wants to come.

They're free for anybody to come. And we spend most of the time talking about food because, you know, the paleo diet sounds challenging and sounds difficult, but it isn't.

We can make some delicious meals and we do. And by the end of the weekend, most people are in ketosis. So, you know, keep it really simple, understand where you're going.

And as I say, just do it. Is there anyone who shouldn't do keto? I think of anybody who should. And the reason why is, is the evolutionary correct. Um, you know, if people couldn't do keytar, they'd been lost in evolution.

Yeah. Many hundreds of thousands of years ago. What about and what about people with low kidney function. Oh it is desirable. I have a I'll just going to quick case history a young man who went to the Gulf War now the Gulf War was the most toxic war fought.

The guys there were poisoned by vaccinations. They were poisoned by organophosphate chemicals that poisoned by biological warfare. And when he came out, he ended up in hospital with malignant hypertension.

He was unconscious for two weeks, scleroderma. And by the time he came see me, he was on the waiting list for renal transplant. His GFR was 18. That's the that was the criteria.

Anyway, of course, this is in the 1990s, the early 1990s, when I was working general practice, we put in place all these interventions, ketogenic diet, nutritional supplements, sought out his mitochondria and his renal function improved.

He his EGFR came back up to 56, which is almost normal.

Toxins, Detoxification, and Glyphosate Exposure

He came off the waiting list for renal transplant. His kidneys coped perfectly. So these are very powerful tools and not just for use because you feel a bit tired.

These are the tools that we start to treat and reverse all pathology, however serious it may be. Okay. Thank you for for sharing that, because I know we have a lot of people who are wondering, should I be doing keto with low GFR because their western medicine doctors are telling them they should not.

Okay, so another. QUESTION Let's talk about toxins. So what you have just unpacked is all the steps to correct mitochondrial dysfunction. But what I would love for you to talk about is how we are being poisoned and how we are getting into this problem in the first place.

Because in my protocols, when I work with people, we focus on all of the things that are foundational, like fixing your gut and detoxing because we cannot get your mitochondria online and keep them online if you're full of organophosphates, pesticides, herbicides, heavy metals, chemicals from your skin products, your cleaning products, you know, the air we're breathing is full of and we are being showered with.

Correct. So let's talk about that and why it must be included in your protocols when you're working with your practitioners. They must be talking to you about toxins. Okay.

Well, all these toxins are new chemicals that the body is not used to seeing. And these toxins are like throwing a handful of sand into a finely tuned engine.

It is going to it's going to crunch it all up mucky. They're all up in many different ways. And the body is remarkably good at dealing with toxins, but it can't deal with an overload.

So we have to do our best to reduce the load. The single biggest load almost certainly is sugars and carbohydrates and the upper fermenting guard. The reason sugars are so toxic is when you burn sugars in mitochondria, you produce a lot of free radicals, which are highly and damaging.

By contrast with ketones, they flow through with very with minimal free radicals. So simply by doing the ketogenic diet and dealing with it, the products, the Atlas maintain your you massively reduce the toxic load.

But as you rightly point out, toxins fall into two main groups. I mean, first, we have to do our best to avoid them cosmetics. And then the bottom line is, if you can smell something, it's in the brain.

And the second point is you should put nothing on your skin that you're not prepared to eat because these toxins all pass through the skin very readily.

So that limit so guess what? There's very little I put on my skin. So that's the segment. But then toxins basically fall into two groups. We have the pesticides, the volatile organic compounds, and the smell is the perfumes and so on.

And we can get rid of those with heating regimes. Now, I know this because I put in this patient three heating regimes measures levels of toxins either by fat biopsy or blood test or urine tests.

And in every single case, the level comes down. And so these days, I don't spend a lot of money on tests to measure toxic load because I know the heating regimes work and I've collected many patients.

But broadly speaking, 50 heating regimes will have your total body toxic load and it comes down exponentially. So it's 50. We'll get it to hopefully another 50 to a quarter, another 62 and eight and so on.

And the heating regime I prefer best because most people can do it is Epsom salts baths now, but Epsom salts, that's magnesium sulfate. Now the point is everybody's got a bath.

Most people got access to a bath and that's the salts are very cheap. Now I can buy 20 kilos for about £25, so each bath costs about $0.50. That's about half a dollar in your currency. So and the point is, when you soak in this hot bath, the heat mobilizes toxins in the subcutaneous moves, the wants the lipid layer on the surface of the skin from whence they're washed off.

And at the same time, magnesium and sulfate travel absorb through the skin. And magnesium deficiency is very common and sulfate also helps us to detox and sulfate deficiency is common.

So that's my favorite that any heating regime will do. So if you're a fit athlete going for a run and sweating and then showering off afterwards, that's key.

If you don't shower afterwards, the toxins simply get reabsorbed. So so whether it's far infrared, Sony, traditional sauna exercise, exo bath exercising, it doesn't matter.

They all work and arguably we should all be doing them all the time because we live in such a toxic world. So why do it so often? Once a week now that will get rid of the pesticides, the volatile organic compounds.

And I know that because I've got the data to show. So the tricky one are the toxic metals, because toxic metals get stuck in the body, they get stuck in the heart in bone and kidney and the brain.

And if you just do a urine test or a blood test, you're not going to see them. So if you want to test for toxic metals and if there's a history of exposure to any sites like dental amalgam, fillings, lead, arsenic, whatever, then I do a urine test with a chelating agent and the collating agent that I like to use is DMCA.

I'm using a self die myself, so it's going to last anyway. DMCA And the way you do the test is you wake up one morning, empty the bladder, take DMCA at the rate of 15 milligrams per kilogram of body weight, collect your urine for 6 hours and then empty the bladder and send a test sample off.

Now the DMCA will grab hold of the toxic elements and pull them out to the urine, and then you will see them properly. And if you go to high level of whatever, then you address, that's a separate issue.

You get rid of the source and then maybe use chelation therapy or whatever. But all the things we've been talking about, vitamin C for the fermented iodine, they also help to get rid of heavy metals so they will start the detox process again.

But you're right, detoxing is really important. And one final comment, because I don't know if you've read Stephanie Sinha's book, Toxic Legacy V. Is coming on this Summit.

Well, you're a lucky, lucky, lucky people then, because she is terrific. She's produced a fabulous book. And she points out that glyphosate in America is spread on the ground at the rate of £1 weight per member of the population.

And since all those end up in the food chain, I think we can infer from that that you and we probably are all

consuming about a pound of glyphosate a day, a year.

That equates to about 450 grams. So we are probably taking on average about we are consuming one gram of glyphosate every single day. Now that is a therapeutic dose that is higher.

The most drug descriptions and glyphosate damages the body in many ways. You know, it's an organic phosphate inhibits or oxidative phosphorylation. So my view is if you've got any money to spare, you should spend as you should try to eat as organically as you possibly can because glyphosate, so abundant and so toxic and so pernicious and is really damaging our health.

And I would also add, so I test glyphosate levels on most of my clients if they have the resources to do it. We do the testing and I find that here's the value of testing for toxins when you see it and we haven't even covered Michael Toxins or any of the other toxins.

There's so much I could talk to you for hours, but when we see a test with those toxins in it, it helps people be motivated to see it through to the end.

And that is the value of testing in my book. It's the motivator when you see it now you're motivated to do something about it. But what I will say is I have many of my clients who eat organic and we see sky high glyphosate levels and it's because they're breathing it and there is cross contamination on organic produce and it's in our water.

And so there so if you see a high level of glyphosate, even though you're eating organic, know that there's probably some extra things you need to be doing, like air purification, like cleaning your organic food even more.

I had a cancer patient once who she she had multiple, multiple rounds of cancer and chemotherapy. And one of the things she learned from the nurses was to wash her produce in vinegar in a vinegar water for at least 15 minutes.

She brings all her produce home from the farmer's market. She buys organic and then she dunks it in water for 15 minutes with vinegar.

Finding Dr. Myhill and Final Advice

She had one of the lowest glyphosate levels I've ever seen, and she's in Southern California, where all these other people who are eating organic in Southern California have high.

And so there is something to washing your produce for 15 minutes in a sink full of clean, you know, vinegar, water. Incredible, right. That's a good tip. Thank you for that. I've learned something.

Yeah, it's working for her. So. So. Huh? Oh, my gosh, Doctor. My help. This has been one of my favorite experiments. Interview. I love interviewing people.

It is. It has been an absolute pleasure. Your work in the world. I mean, the legacy you have left already with your books, with your research, with your work, with patients, with your fight against the machine is what I would call it.

So everyone, please, please go find Dr. Michael. How can our audience find you? Well, I'm not going to website, just doctor my health dot co.uk and it all comes up.

But there's a publisher in in America, Chelsea Green, and they've got many of my I think they've got all my books. So there's books on the website that's free or just contact me directly and I'll trump it in the right direction.

So incredible. So incredible. Any final words for our audience? I know you have dropped so many pearls of wisdom, but what would be your final words as we end this amazing interview?

Well, I would tell everybody to do is take control of your own health. Do not rely on the doctors and doctors. Take control of your own health. Ask the question why?

And as I say, just do it. Just get on and do the regimes send or look for your well-being? Thank you so much. I know everyone's going to go back and rewatch this and take notes.

Thank you so much. You take the letter. Bye bye. Bye.