The Powerhouse Within: Rebuilding Health Through Mitochondrial Regeneration Transcript

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Introduction to Mitochondria and the Podcast

Mitochondria is the reason we are alive. So, if I take mitochondria out of your cell, your cells has no capacity to make more mitochondrion. Your mitochondrial decides whether the cell will live or die.

A cell won't die till the mitochondriac decides the cells needs to die, so that tells you it does everything. If you're overwhelmed with chronic health symptoms and still don't have answers, you are not alone.

I'm Dr. Javan and on redefining wellness with Dr Javin, we'll be exploring root causes like Lyme disease, mold and parasites and I'll guide you with simple and practical steps towards real healing.

Welcome to the redefining wellness podcast. I'm your host, Dr. Jay Moore. Today, I am with Dr Sundeep. He is an expert on the mitochondria, the bacteria in your body that you can't live without, and you need to know more because this is your powerhouse, right?

But it's so much more than that. Without the You don't recover. You have energy to think, you don' have an immune system. By the way, it also controls hormones, your response to everything in the world.

So we're going to dig into this and then some major research breakthroughs that he's been able to put to the forefront with a product that. He's saying is going change the game.

Thank you for joining us. I'm really excited to talk about mitochondria because The cell danger response is something that we'll get into. This is a response that the mitochondria has that you're going to be able to explain way better than I can.

But if you have histamine responses, if have a brain fog type or something, a detox reaction, If your body just doesn't act normally, that might be cell-danger response.

If you are dealing with chronic infections that keep coming back, and if your dealing chronic fatigue, you need to know this, chronic Epstein-Barr, or chronic Lyme.

I mean, the mitochondria are the root of everything. What made you want to study this? Well, I got introduced to this field in 2009. And to tell you frankly, before that I did not know much about mitochondrion.

Even though I've spent 39 years in the pharma world, mitochondrial was still peripheral to our understanding. But in 2009, I was looking at some data and then it was like a two-year-old in me wanted to ask the question, why is this happening?

She alluded to the fact that, okay, you get repetitious infection, all the various things. You have to question why it is happening. What is it happening in your body that makes you have the infections again or as leading to brain fog, et cetera, or even chronic diseases like diabetes?

So people say, okay, if you have a bad gene or you'll have bad nutrition, these are the things that happen. But let's keep going deeper. Why does it happen?

Why Mitochondria Drive Health and Chronic Symptoms

Why is it that we don't get infections all the time? Because every day you're exposed to viruses and bacteria. You don' live in a sterile world. Well, I just want to add to that is there's people that get sick all the time.

There's, people, that don't like for me, this is for, me. If people are sick, all around me I don' care. I'm like, i'm not going to get, sick. So the mitochondria are playing a role in this.

That's it. Because they are your defense and sentinel. We, mitochondrion entered the part of our life and existence about two and a half billion years ago.

And as nature and life evolved on planet Earth, there's one thing that we share in common with every oxygen consuming species on Planet Earth. And that includes plants.

We all have mitochondria. You were saying to me earlier that there are two organisms that depend on, and we're basically going to die without. And they're both bacteria, right?

Yes. So we have a bacteria in our bodies, mitochondria, that if we don't take care of it, then we all have energy. We're dependent on bacteria. Correct.

All the germophobes out there right now are going, wait a minute, what? Exactly. There are two kinds, of course, doesn't mean all bacteria are good for you.

Right? So of course there are bacteria that will hurt you, but to keep you healthy. So often we look at it like the anti-sense, right? Anti-bacterial.

But that doesn't mean all bacteria are bad for you. We have to really recalibrate our thinking a little bit. Right. That I'm not suggesting go get any kind of bacteria, But there two bacteria in your body that function to, keep your healthy, The one in your gut, the microbiome, and the other one, in every cell of your body, except the red blood cell.

Every cell in the body has the mitochondria. Except the Red Blood Cell. And their sole function is to keep that cell functioning, alive, doing what that cells needs to do.

So it'll make sure that your heart cells do what they need to do, your liver cells, do they what need do. But they all are able to because the mitochondria are sensing the state of that cell.

It's not just providing energy, it's also sensing any insult that may be coming in. And it is dealing with it. Its dealing it by initiating cellular processes.

Your genes cannot make proteins. unless the mitochondria tell it to and give it the energy to do. So let me ask this because mitochondrion, the powerhouse of the cell, if you even know what they are at all, that's the understanding that the majority of people have.

If you gave me the bullet pointed list, just like a couple of words for each bullet point, what are all the functions of mitochondrial? So that's a pretty long question, but let me put it this way.

Mitochondria is the reason we're alive. So if I take mitochondria out of your cell, your cells has no capacity to make more mitochondrion. Your mitochondrial decides whether the cell will live or die.

A cell we'll not die till the mitochondrian decide the sell needs to die So that tells you it does everything. When you change cells, for example, in your gut, you get rid of old cells and new ones are being made.

It's the mitochondria that is doing the turnover. So the Mitochondria are monitoring the functioning of every cell. Some cells don't turn over like your heart.

They keep the cardiomyocytes alive or the heart cells alive. Right? So when, if you ask me a question, what do they do? They do everything within the cell that needs to be done.

They will initiate protein synthesis, they will stop protein syntheses. If you have an infection, there are the ones that

respond to the infection. if You have any other nutrition coming in, They deal with the nutrition.

Because what you eat is processed by the mitochondria in your body. So basically you're saying is mitochondria the operating system of the body? Pretty much.

They're running operations, they're telling everything else what to do, where to go, how to. Exactly. Okay. And just to clarify mitochondria are bacteria.

Correct. We live in the antibacterial world. Yes. Because everything we do everything, we buy everything. we put on our clothes and our mouths pretty much today has some sort of antibactyrials something on it.

So no wonder we're living in a world with chronic disease because that's what I treat in my clinic. That's what I work with. And I want to make sure we get there, but I really am thankful that you were able to explain a little bit more of what mitochondria do, because it's such a misnomer out there of the effects that the world is having on our body due to all this antibacterial stuff.

Like everywhere you go during COVID was put all of this anti-bacteria all over your body. I'm like, what about the microbiome on my hands? What's going to happen when I killed that off?

Yeah, that's not a good thing. So then when it comes to mitochondria and you've done, you said 39 years of pharma and last, how many years has it been?

16 years in mitochondrion. 16 Years in Mitochondria. I was reading something that I think you had on one of your pamphlets and he said something like mitochondrial If you can get your mitochondria working, who cares about the gym?

Your body's going to build on its own. You're going build muscle and brain tissue and thought. So how do you actually get mitochondrion healthy?

How Mitochondria Support Energy, Immunity, and Cell Function

Because mitochondries causing all these symptoms we mentioned before. How do get them healthy. Mitochondria are in your cell, only are there to respond to the needs of the cell.

Okay. So if you don't use it, you will lose it. Right? So when you say, even with muscles, with your brain, say use, it or lose, right? Yeah. Mitochondria work on demand and the best way to keep them healthy and enough of mitochondria is to, keep putting demand on it okay.

Which means be physically active, read and sleep. And here's another interesting thing. that your body uses mitochondria for every function. And your brain is only 2% of your weight, but it uses 20% percent of its energy.

Right? And you know, when is the most energy consumption of the brain? Not when you're awake. It's when you're sleeping. Interesting. So when are going into REM sleep is the highest consumption of energy by your brain.

What's your brain doing? It's going into this neuroplastic zone and processing your day, your previous day. It your other day is laying down your short-term memory.

Its washing off trivial information, right? So it's laying on all these things and it in such intense use of its energy that the rest of your body is actually in paralysis.

Your body energy is so focused on the brain, it lets go of the rest of your body. So if you want to lose weight, get to REM sleep. That might be a little simplistic.

Simplistic. But this is the reason we say if you have a good night's sleep, it's actually good for you because you're allowing your brain to process the things.

And that's why sleep is so important. Then again, that energy component is important because if don't have it, you don' t get into this REM sleep. You don t sleep well.

And you have this deficit of energy in the morning because you've not been able to process things in your brain. And it's all done by the mitochondria.

So to stay healthy, to keep mitochondrion healthy. Sleep well. That's your Brain exercising. and physically move and be active during the day. And that's your periphery exercising.

And, that is the really only natural way to keep your mitochondria level up and functioning well. Now, a lot of people say fasting works on mitochondrious.

Correct. Or what about all these tools like red light or hyperbaric chambers? There's a lotta claims around mitochondrion. Are you seeing data that backs?

devices of any kind or diets of kind to positively have outcomes on mitochondria in a significant way. Correct. So yes, these are responses the body will have.

For example, the whole issue of restricted diet is basically you're not overloading the system. Let me give you an example. If you were to have a fireplace, Right.

And you want to light a fire and you put three logs in it, you'll get a good fire. Right? Now suddenly you've put 15 in there. Now you got a problem. Yeah.

So what we do is we don't give the body to process the food the right way when we overload ourselves with the system. The mitochondria are distressed.

They are not really functioning at their optimum set because it's a balance. Right. They don't, it does not necessarily create new mitochondria the way exercise does, but it allows your current mitochondrion to function better.

Okay. So restrictive diets take the pressure off, allow them to focus and do their thing. Yeah. What about all the technologies? So yes, so the idea here is that when you have red light, okay.

So when have read light or even ultra sound perturbations, the mitochondria look at it as an external, quote unquote, perturbation of exercise. If you were to think like a quasi, right.

And the Mitochondria ramp up their activity. Yeah. Okay. And if the cells are perturbed, then they will create a process of energy deficit and the cell will make more mitochondria.

But the most effective way is exercise because red lights don't penetrate deep. And at the same time, it's not your internal whole entire body. This is one of the questions I asked early on.

That what is so key about exercise that makes more mitochondria, right? That's your natural way. And if you look historically, most of us who have been physically active tend to stay healthier.

That not a debate. and that's healthy, not just by physical function, but by brain function. So exercise is the fountain of youth. Or the fountain of good health.

The fountain, yes. All right. So I'm kind of taking us down this path because there are so many claims about mitochondria out there. And without proper mitochondrion, all chronic disease exists.

With good mitochondry, a whole lot less exists, so that's just a simplistic statement. What about all these supplements?

Exercise, Sleep, and Lifestyle for Mitochondrial Health

There are a million supplements and a billion, let's say, ingredients that are claimed to be mitochondrial supportive. Whether you're talking about CoQ10 or NAD, or for that matter, people lump in butathions and B vitamins.

What are you seeing with some of these more common mitochondria ingredients? Are they effective? Do they do anything? Yeah. No, I think they do. I thing they have a role.

Uh, so what it is that in the absence of good nutrition, these are the nutrition for your mitochondria. Okay. Now there's two components to this. It's the yin and the yang, right?

You can have X number of mitochondrion and make them function better. Yeah. But if your, mitochondrial are already depleting, And you make them function better.

You cannot achieve that better cellular state because you don't have enough mitochondria. So when you say depleted, just to clarify, when, you've not used your mitochondrial enough, then they've reduced the number because didn't use it.

Correct. All the supplementation may make what you have worked better, but they don' make new ones. But they don't make new ones. The only way to do that is either get out and exercise.

Correct. Or some research that you've done has said that this product, which you created. Yes. Can do. Exactly. And that was the goal of the thing. So to preface that, let me say that eight, 20 to 21 is when you'll have peak mitochondrial level.

That is up until then your body is growing. Think about that growth as internal exercise, Your bones are growing, your muscles are going, Your brain is growing and the body needs the energy internally to grow.

At age about 20, 21, you stop growing. From then on, You lose about 10th to 15% mitochondria naturally every decade. That's called aging. Okay. What if you're exercising and doing those things?

Then you can slow it down. Okay? So, but most of us do. But then there are other components. Your bad diet, your other things, diseases will cause mitochondrial decrease even more.

Right? Yeah. Now what happens often is that either you're not able to exercise or you don't exercise enough. And that was the fundamental question we were asking that how does the body make new mitochondria when you exercise?

So, all right, let's just go with that. With 16 years of mitochondrial research, What would you say are the three things that you've learned to create the most mitochondrial growth?

Well, actually I could shell it down to one, exercise. Well yeah, but we've said that one of the top three. Eat good food to protect the ones you have, right?

But I can tell you that nature gave you this resource to use to live health and gave. You a one reason is use it or lose it. Okay. There is no real other way.

Yeah. Other is all temporary. The real way is to. So exercise is number one. It's the thing that grows them, but I know with your product, you've talked about.

You found an ingredient that actually causes mitochondrial growth. And what is that? So it's called epicatechin. Now the reason is, that what we were able to figure out is the mechanism under which your body makes more mitochondria when you exercise.

We're the first ones to identify a new human steroid that the mitochondrion make. when you exercise. So when

your exercise, mitochondria put out this steroid, it is a signal to the cell, let's make more mitochondrion because there's an energy demand.

This signal goes to nucleus, and between the nucleus and the mitochondry cells now make mitochondrial without cell division. And this particular steroid is the key signal that comes out of the mitochondria when you exercise to initiate this process.

This natural product we figured out exists in green tea and cacao. And we fished it out with that and we studied its properties, both in human studies and preclinical studies to show exactly what it does.

It does exactly, what that steroi does, So this follows the mechanism of generating mitochondria without you having to exercise. So if you imagine kids who cannot, who have primary mitochondrial disease or elderly folks or even young ones or the middle-aged people who had chronic diseases, And they cannot exercise.

Supplementation of the mitochondria provides them the bio-energetic resources to address these pathologies. And it helps you rebalance your body back to a healthier phenotype.

We've shown that in multiple clinical studies, in a variety of clinicals studies that if you do that, your bodies tends to respond. Because this goes to what you raised early on, the cell danger response.

Supplements, Red Light, and Mitochondrial Support

When you have a chronic disease, your cells are stuck in that cell, danger, response, and they don't have enough energy to address that self danger to come out of it.

What you're doing is providing them that energy. They can address the issue and come outta the self-danger response Well, let's dive into that topic a little bit.

Let's talk about more of that complex chronic illness state. And you said cell danger response, bringing people out of. One of the first questions I asked when I saw your product and they're like, well, this is exercising a pill right here.

This is exercise in a pillow. So this just creating a steroid that triggers you to make more mitochondria. Therefore you can create more energy. I go, what happens to a person that's in so danger of response that with the slightest stimulation.

I'm not talking about we go and have them do a major workout. We give them some significant supplementation change. The wind blows funny. They put a little red light on their body.

a few granules of a pill, if they have a degranulation of mast cells that creates a symptom profile where they feel like they're sick, they've been getting the flu.

If I give them something like this that create more energy, and correct me if I'm wrong, but part of what this will also do is when we give this ingredient, It's going to tell the cell make more mitochondria and if it can't, then we're going go to apoptosis.

Is that right? So the mitochondrion induces apopptosis, so the apoplectic pathway is when the cells has become dysfunctional, say through a gene mutation.

Yeah. Like a cancer cell. So when you do this, and we've shown that in studies, it will stop the tumor from growing. Okay. Okay? And what it does is that peripheral cells of the tumor, as they're maturing, those mitochondria gets forced back into the oxidative normal phenotype.

And because the gene is mutated, this cell goes into apoptosis. Okay. All right? So you're right. The idea here is when the mutation is there, the mitochondrion cannot fix the genetic mutation.

Right. So every day in our body, we create mutant cells every, but we don't get cancer because you're healthy and your mitochondria in those mutated cells induce apoptosis and the cells die.

As those mitochondrial get weaker and are not able to get rid of those mutant cell, those cells incorporate themselves. And when they multiply, they multiplied more mutant cells and they keep going faster and faster.

Now, if you trigger them to create the steroid, then that puts them out of the overproductive gene state. Well, and how does that happen is that the cancer cells, because they want to replicate really fast, yeah.

They tend to burn sugar. Okay. Rather than fat. Humans, mitochondria love to burn fat, but fat processing takes time. And these cells want to multiply really fast.

So they burn sugar and they keep burning sugar. Okay? And when you induce exercise or this external impulse, you create mitochondrion that wants to go back to burning fat And when as soon as those healthy mitochondria level goes up, they induce apoptosis and the cells die.

Epicatechin and Triggering Mitochondrial Growth

Correct? So the main key is what is the fuel there? It's the sugar versus fat. And so sugar continuously burning is a bad thing. That's why if you see epidemiologically, people with diabetes tend to have worse cancer outcomes.

Yeah. Right. People who exercise regularly have less cancer. Yeah, right. So those things are known because it's the, when you have diabetes, you'll have extra glucose for the cells to burn.

Interesting. so if I give this to somebody that's that extremely hypersensitive state and it triggers a shift away from sugar into a shift in the fat and the cells that were damaged due to let's say uranium, radium, mold toxicity, all the junk in world that we bring in, those cells are likely going to head toward apoptosis because we shifted them out of the negative pattern.

Exactly. I guess my concern is If I do that and they're already in this state of hyperreactivity, if we slow dose up with your ingredient, it's going to go, we just have to pace it at the right pace to get enough turned out of cell danger response.

Yeah. So on that one, there's an interesting phenomenon in our body called cellular hormesis. Okay. All right. Cells have a hermetic control. that each cell within the different tissue has a balanced state of existence.

Okay. And what that means is that if you try to go beyond that, the cells will resist. Yeah. All right. The prime example of hermesis is things like, say, your body temperature.

Your body, basal body's temperature is 98.4 degrees Fahrenheit. It's the mitochondria that maintain it. Exquisitely. Because just 0.6 degrees Fahrenheit higher at 99 degrees, Fahrenheit, you're already feeling febrile.

Not well. At 100 degrees you have a full-blown fever. And what happens is that is done by the Mitochondria. to affect infection because it's stating the body base and temperature to address an infection.

That's when you get the temperature. So if you think about these other contaminants or insults that have come in, that has gone in and you apply the system, and we have shown this.

If you take too much of it, it stops working. It's the same thing. Exercise to a limited is healthy for you. Beyond that, either it won't work. or it'll be damaging to you.

Correct. So finding out what your hermetic stress level and tolerance is with this or something else is going to be key. Yeah. But you said it will stop working.

Let's say I have a very sensitive person. I pour a bunch of it into a cup and they drink it. It can only go to its

threshold or will that take somebody too far?

No, it won't take them too far. It just won' hurt them. Okay. So the part about this molecule is that it wont hurt you. But if you take too much of it.

It won't help you. And that's why we spent many years pre-clinically and clinically to understand what is a good dose. So you don't have to be at the ideal dose range.

You have ideal dosage, you have be in a Good dose Range. But it's the same thing when you go exercise, right? It's not like there's a prescription, whether you should do 10 reps or 20 reps.

You figured out for yourself, what's your body's best rep, right?

Cell Danger Response, Apoptosis, and Chronic Illness

We did similar studies and what we found that for normal adults above 35, 40 kilos, you're looking at a hundred milligrams a day. If you below that, it's 50 milligrams ago.

And what that does is that keeps you in that quadrant. the top 10 percentile, 15 percentiles where you will respond to it. Now, remember one thing also that it's not one and done because your mitochondria have a half life.

They're not there forever. Each cell, you have mitochondrial today and they have half a life, anywhere between 28 days to 30 days or 40 days, depending on the cell type.

So the cells have to turn over mitochondrion and make new one just to live. So even if you don't exercise, there's still energy requirement of your body.

So if I'm dealing with some of that's pans pandas, autistic, mast cell, chronic Lyme. What you just said to me is very interesting because if your turning over your mitochondria every 28 days, but these people oftentimes have gotten sick enough that they're not very high functioning physically, so they are not exercising.

But those mitochondrial that are damaged. are going away and being remade. So there's hope that if we can just start moving the needle to start pushing a little bit, you're going to get new tissue every month.

Every month you should be able to take a step forward and a stop forward. And with them using this product to help have that steroid production to create new mitochondria, getting them into exercise as quickly as you can get them out there to doing it.

Of course, feeding them appropriately, keeping them away from the antibacterial things that can damage mitochondrion are all going to be a piece of the pie that helps to pull somebody out of that.

And I agree as a clinician, these are huge pieces of a puzzle. But as we're getting close to the end here, I'm curious, have you done many studies with the populations I just mentioned?

PANS, PANDAS, autism, what are you seeing? Yeah, so we are doing studies. So we looked at ME, CFS patients. We've looked that other dystrophic patients, primary mitochondrial patients I I am not sure some of the clinicians have looked Pans, Pandas or not.

I think we've look at Lyme disease patients and yes, we see a response. And now this is not a big study because it's all open label observational studies, but to the point you're made is absolutely correct because they have an external insult to their mitochondria, so the cellular infection.

And since they cannot move, they're spiraling down. All right. And if you can give them some help to combat, your body, I mean, this is a word coined by a good colleague of mine, Professor Bob Naviel called saligenesis.

Your body has an inherent capacity to heal itself. Okay. It is when it loses that capacity is, when chronic diseases show up or infectious become chronic disease.

Yeah. All right. It may not be cured of the disease itself. So, but it will help you address the comorbidities or help with your natural life. In short, our podcast is this sentence.

Chronic disease and infections is the absence of mitochondrial regeneration. And particularly mitochondria depletion and dysfunction. Love it. Well, how do people find more out about your product and who you are?

Clinical Applications and Where to Learn More

So you can go to our website, BlueOakNX.com. We have a lot of literature. we are very clinically, scientifically driven. There's an email. If you send us a note, we'd love to talk with you.

But one of the things we're doing is really giving the product a very serious clinical scientific base also, so that we also fully understand. For example, we are doing six plus clinical studies right now, everything from muscle teostotes and osteotosis to myopathies, and we going to continue to look at that.

We're working with clinicians as our lead advocates because we want to make sure that people who use this product have a third party, independent party also making an assessment.

But we also have people, who do it for their own health. I take it myself. And that's how you learn more about us. I love it. Well, I really appreciate you giving us your time and thank you so much.

Thank you for tuning in to redefining wellness with Dr. Javen. If this episode spoke to you, please follow and share this podcast with someone who is ready to take control of their chronic health symptoms.

Also, consider leaving a review. It helps more people find the show. See you here again.