Cell Danger Response: Why Healing Gets Stuck Transcript

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Introduction to chronic illness and cell danger response

Medicine, especially current medicine, has usually been pretty successful at treating acute illness, right? But it's largely failed to effectively treat complex chronic illness because it is using the wrong framework.

If you use the right framework, you're not going to find it. And he points out that in the past 70 years, not a single chronic is curable using current medical paradigms unless it has a cause that can be bypassed, killed, burned out or cut out and that's a quote from Dr.

Naviot. Hi and welcome to The Balancing Point. I'm Dr John Needers and I am here to make traditional Chinese medicine, functional medicine and integrative health simple, practical and fun so you can restore balance, boost vitality and enjoy a healthier life every single day.

Hi there. It's Dr. John. I'm back here with another presentation for The Balancing Point, and today is an incredibly important topic. And it's really the root of why so many people suffer horribly from chronic complex diseases and it's a condition called cell danger response and so I'm going to talk about that at some length today.

At a future presentation I'll go into more treatment options and how to go about bringing yourself back to good health. So today I am going speak about cell-danger response.

Now this is part two. I did part one a little while back looking at how different ways that traditional Chinese medicine can help restore health in people with cell danger response.

And this is really near and dear to my heart because the conditions we're going to talk about are things that I see every day that work. So very, very important stuff.

This is based on the work of Dr. Robert Naviot. MD, PhD, who has done some brilliant, brilliant work on mitochondrial function, dysfunction, and this problem.

Dr. Naviaux and the mitochondrial disease framework

So the question is, what if chronic illness isn't a failure of your body? And that's how a lot of people look at it. It's like, oh, my body's failing me.

But just it's a failure of your body to finish healing. Now there's whole healing cycle that has to happen, which I'll talk about a bit. And if that gets interrupted, then you don't finish feeling.

Kind of a different example is prolo therapy. So in prolotherapy, they inject a sugar solution typically, and they can do other things, but typically a solution into an area where there's say a damaged tendon.

And what that does, it reminds the body, hey, there is still work to do here. We got to finish this healing process. So it brings more of the healing chemicals, we call it the soup.

There are about 15 different things that have been discovered. in that process of completing the healing. And it's one of the reasons acupuncture works, because as soon as you put a needle in, it calls out to the body to bring that soup to start to really speed up healing So what we're going to look at is cell danger response, What is it, and why is critically important?

So what's being overlooked with mitochondrial disease and disorders? What's cell eugenesis? A big word. And what is Dr. Navio considered to be so important about the second book of medicine, as he calls it?

So, Dr. Navio founded the Naviolab at UC San Diego in 1994. And he originally focused on treating children with mitochondrial diseases. Naveo was an absolute pioneer in mitochondria medicine, metabolomics, and systems biology.

Almost every cell in the human body is filled with my mitochondrion. I mean, hundreds of mitochondry. These are the powerhouses of energy production. So ATP, adenosine triphosphate, is a molecule that creates energy when it breaks down into ADP, or adenosine diphosphates, and then through a very complex process that happens inside the mitochondria.

There's the Krebs cycle, the citric acid cycle and the electron chain. It's very complex, and if that complex chain gets broken, you don't produce enough molecules of ATP.

And so if the mitochondria are producing energy through the Krebs cycle, again, sometimes called citric acid cycle.

How mitochondria produce energy

It actually has a newer name that I don' like. So I'll stick with Krebes. That's what I learned years ago. In the electron transport chain, approximately 30 molecules are ATP are created.

If the mitochondria are not processing properly, there's a different pathway that's used to create only two molecules. So as you can see, you'd have 15 times more energy in a cell if the ATP and Krebs cycle are working properly.

Now, why does this matter? Navio argues over half of all complex chronic diseases have a common biological root. So that's his argument, which I absolutely, absolutely believe in.

And it has implications for autism. MECFS, which was more commonly called chronic fatigue syndrome at one time, Gulf War syndrome. The soldiers that were overseas for the Gulf war, many of them came back with their lives simply falling apart.

And there was no single thing that they could point to as being the reason that things were lingering. Then you've got long COVID. We have dealt with so many cases of long COVID, and it's not an easy condition to treat.

It is treatable, but not easy. And we've seen that both in people who had COVID and those who have had certain vaccinations. conspirators that show up with Lyme disease like Babesia and Bartonella, Ehrlichia, et cetera.

And then Alzheimer's disease. Alzheimer disease is really a disease of poor energy production in the brain and the mitochondria that then is the root for several other problems that arise.

He calls his work The Second Book of Medicine. And he said the first book of treating illnesses was very successful for a lot of conditions. Medicine, especially current medicine, has usually been pretty successful at treating acute illness.

So someone comes in with a fracture.

Cell danger response and the healing cycle

They come in an infection of some kind, et cetera. Our medical system is pretty good at treating those, but it's largely failed to effectively treat complex chronic illness because it is using the wrong framework.

If you use the right framework, you're not going to find it. And he points out that in the past 70 years, not a single chronic is curable using current medical paradigms unless it has a cause that can be bypassed, killed, burned out, or cut out.

And that's a quote from Dr. Navio. By the way, traditional Oriental medicine has been much more effective at

treating this second book type of illness than has conventional medicine.

So what is the cell danger response? The CDR or cell-danger response is an evolutionary conserved metabolic response that, this is critical, protects cells from harm.

It is purposeful. it is not an accident. Uh, it can be triggered by chemical, physical, or biological stressors. So that's things like infections, toxins, toxicants, trauma, and emotional stress can all be triggers.

So mitochondria actually act like the cellular canaries in the coal mine, the first responders to any perceived threat. So those of you that are too young to remember, coal miners used to carry cages of canary into the mines.

And so when the carbon monoxide got too high, canaries would die before the humans. When they looked over and saw a dead canery, everybody rushed out of the mine.

So what happens during the cell danger response? Mitochondria shift from energy production, right, which is critical for growth, repair, and function, to a defense mode.

So cells leak something called extracellular ATP or small e, capital ATP, which acts as a universal danger molecule alarm signal. And it then communicates with all the surrounding cells.

It says, hey, you've got to switch into danger mode and stop putting your energy into growth, repair, and function. And so the mitochondrial metabolism pivots from oxidative phosphorylation.

That's one way of reducing oxidated stress. So it switches from that, which is an effective form of energy, and glycolysis, which is used as an emergency fuel, sorry about that.

And the immune system ramps up and inflammation spreads systemically. So your whole body can become inflamed if you're suffering from cell danger response.

The three stages of the healing process, when things are going good, the good cycle, cell danger response one, two, and three. So CDR1 is inflammation and acute defense, right?

Something happens and your body goes into inflammation, which is a form of healing and a cute defense. And so something called the M1 mitochondria, are pro-inflammatory.

So they, in this stage, glycolysis dominates and your body's really burning a lot of energy to create this inflammatory response. CD2 is proliferation and cell growth and repair time.

That's when it begins. The M0 mitochondria support the Warburg metabolism. And if you ever want to take a dive into somebody, check out Otto Warburg. This guy predicted the cause of cancer, pointed out the entire metabolism of the cancer in the 1930s, he's been proven true.

What keeps healing stuck

He predicted technologies to look at heavy metals and vitamins, et cetera. intracellularly, which is where they need to be. And he actually foresaw the invention of the oligo scan, we still use for heavy metal and vitamin levels in the cells.

Then you've got CDR3. That's when things are going good. You get differentiation and restoration. It's anti-inflammatory. The M2 mitochondria return and you get that oxidative phosphorylation returning and it's restored and the healing process is complete.

Now here's something that's critical. This is the staging of the heeling process. The steps cannot be skipped and they cannot reversed. It has to go in exactly this order for healing to happen.

Kind of like the stages of development, right? You got to be one year old and then two year-old and three year and four year. You've got go through a process of growth, whether it's physical, mental, emotional, but it is a processes and you can't really skip any of the stage because they all depend on each other.

So when the cycle gets stuck, so cell danger response was designed to be temporary. You have a problem, you have an acute illness, You'd have acute attack from something.

And so, cell-danger response kicked in. In complex chronic illness it gets stock and it never fully resolves. So you stay in that healing, mess for months, years, decades, because the complexity of the mitochondrial production of ATP is never fully resolved or restored.

So the EATP continues to signal danger, even though the original three is gone, the original threat is going, okay? It just keeps signaling, because it gets stuck, right?

You've got your foot on the gas pedal and you see a red light, but your car, your feet won't get off the pedal, you're just going to keep going forward.

And that's kind of here, although in this case, it's more like stepping on a brake. The healing process has stuck. So the body stays in lockdown mode, inflammation persists, Energy is diverted, the organs suffer, and you get severe fatigue that can persist for years.

And this is the common underlying thread in many and I would say most complex chronic illnesses. So again, autism, ME-CFS or chronic fatigue, fibromyalgia, POTS, postural orthostatic tachycardia syndrome, dysautonomia, long COVID, mold illness, autoimmune disease, and many, many others.

That's why it can take quite a while to heal any of those because you've got to really restore that whole cellular health cycle. Okay, so what keeps the cell danger response stuck?

And there are four major blockers to healing. These are really from Navio. I think there's an additional one, but I'm not going to go into that right now.

So persistent or unrecognized infections. You know, there are so many viruses that people have that they think they caught it and now it's gone. Well, I'm going to talk about that in a minute, how many of these viruses never go away, like Epstein-Barr, HHV6, but it could also be Lyme disease, Bartonella, Babesia.

A lot of people think they've gotten over Lyme disease and then they'll get like a COVID type infection and suddenly the Lyne disease gets reactivated.

Candida overgrowth is also a problem. And then you get toxin and toxicant exposure. So you have heavy metals like mercury, lead, aluminum, which all impede the healing process.

You get mold and mycotoxins, pesticide exposure, If you live within a certain distance from a golf course, your odds of developing Parkinson's disease go up dramatically because it damages certain areas of the brain.

Environmental chemicals, plastics, et cetera. Toxins are things that are naturally occurring generally.

HHV-6, nervous system dysregulation, and salugenesis

A snake bite. What do you call those? Spider bite, that's what you'd call it. Things like that. Those are toxins. Toxicants are things that we humans have put into our lives, into the earth, and to our air.

And so those include the environmental chemicals, the pesticides, plastics, et cetera. If you ever read articles on mycoplastics in the human body, if it doesn't scare you, You're in trouble because it should scare you.

And so then mitochondrial dysfunction itself can keep cell danger response stuck. So you get the damaged energy

systems that can't generate the resources necessary for the healing cycle.

visuals, pictures of the Krebs cycle. You see, it's very complex. There's a certain order that the acetyl-CoA then becomes something else, and it keeps going around in this circle.

And in order to have that occur, there are many, many necessary vitamins and minerals, magnesiums, critical, zinc, the whole range of B vitamins, et cetera, all have to be present in the mitochondria for the energy cycle to complete.

And then the fourth thing that's often, often overlooked, particularly in a mainstream medical system are unresolved psycho-emotional traumas. So the nervous system keeps broadcasting danger, danger Will Robinson, and it keeps overreacting to the healing signals, or I'm sorry, it keep overriding the signals.

So the HHV6 connection often overlook cause of cell danger response. A landmark Navio lab collaboration done in 2020 showed that this is an amazing number.

Over 90% of ME-CFS patients had serum that had fragment mitochondria tied directly to HVH6 reactivation. So if you have HB6, immune system gets shut down a little bit by a cold or whatever or stress, and then the HHV6 gets reactivated.

It can cause major injury to many areas of the body because the mitochondria are fueling everything. So the virus triggers a two-edged sword. it gives you antiviral protection at the expense of energy production, right?

So it stops the viral response from going to the surrounding cells, but then all the cells shut down and stop producing enough energy. And that study was done at the University of California, San Diego.

It's pretty easy to find. That was just one activated virus that they tested. it's likely, easily likely that there are also reactivations and cell danger response to other of this very, very large herpes family of viruses, even herpies one and two.

These viruses stay in the body and they can be reactuated by a number of factors, right? You look at shingles or reactivity of chickenpox viruses and that can be triggered by exposure to the sun.

You know, you get a sunburn or stress is one of the biggest or you can have another illness and then that becomes reactivated. So the nervous system as the gatekeeper or why am I hitting a wall in my recovery?

Chronic activation of sympathetic nervous systems, right, that's the fight or flight system, keeps the EATP signaling cycle elevated. It tells your body there's danger, there is danger.

And this is actually a nervous system issue that is happening without any problems occurring like viruses, bacteria, et cetera. So another quote from Navio from 2023, the absence of parasympathetic autonomic signals leads to hypersensitivity to local progenic danger.

Don't worry about that word, but hypersoncitivity the local danger signaling and slows healing. or their practitioners who treat only physical triggers, pathogens, toxins, et cetera, without addressing nervous system dysregulation often get a wall in recovery.

Why chronic disease keeps rising

So in our practice, There are several different devices that we recommend that can work with the vagus nerve system and reset this parasympathetic nervous system so that your body gets out of that sympathetic nervous state.

We also have a variety of programs that recommend, several of which are free to help people get through trauma. Salugenesis, this is a cool word that I had never seen before, before I was checking up on Dr.

Navio, and how we reframe how think about healing, right? Why pathogenesis alone isn't enough, modern medicine is built on pathogences. You find the cause, you remove it, or you kill it.

Right? You poison it or cut it out and the patient recovers. So, for example, insulin doesn't cure diabetes, although it does keep the patient alive longer.

SSRIs don't care depression, right? They kind of balance it while you're taking them. In some, oh, about a third of cases it works. Blood pressure drugs don' care high blood pressure, they control it.

All of these are helpful, but none of them are curative. The rising tide of chronic illness in the 1980s, approximately 5 to 15% of children suffered from chronic disease.

Now, in the 50s, it was much lower than that, much low. But in 80s we have a little better record keeping, and it's 5-15%. Now that sounds horrible, but today 54% percent of US children have at least one chronic When you get older, 65% of adults under age 65 have one or more chronic diseases.

And 90% adults over the age of 65, have at least one chronic disease. So the annual cost of chronic is 4.1 trillion. trillion dollars. That's 90% of total U. S.

health care costs. Now, that's about all I'm going to say about cell danger response for this podcast. In a coming podcast, we'll spell out exactly what to do to treat cell-danger response and mitochondrial function, so stay tuned.

And thanks for tuning in today. This is Dr. John saying be happy, be healthy. Thank you for joining me on The Balancing Point. If you enjoyed today's episode, please follow the show, share it with a friend, and leave a review.

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