Introduction and mutual admiration

Dr. Gordon, welcome. Thank you. Thank you so much, Ari. We have been having some really delightful conversations that haven't made it to airtime yet. So now we're going to give it another shot.

As you just alluded to. You are one of my absolute favorite people to talk to. And somehow, whenever we're scheduled to do a conversation, we always end up talking for like an hour separate from the podcast.

And I hope that listeners, after hearing this, will will realize why or will. We'll quickly start to realize why when they hear you speak, because you are one of the most fascinating original thinkers that that I've encountered in the whole field of health experts, somebody who really who really thinks deeply about things and is not just thinking in the sort of predefined boxes of conventional medicine or functional medicine and following the protocols that have been laid out by someone else and following the rules and operating within those those paradigms, those conceptual frameworks.

You are someone that is has been in the trenches of working with complex chronic illness for many decades and many thousands of patients. And you are a deep thinker that has, you know, thought about things in novel ways and tried to come up with your own explanations, your own conclusions, your own ways of doing things.

And for me, that's what really makes an exciting conversation and makes it fun for me to to speak with someone. So I am excited to get into this with you.

And with that, in mind, let's do like a meta level, 30,000 foot view. I want people to just get a sense of your overarching paradigm through which you see the landscape of health and illness.

So what? How would you explain to someone what the difference is? What's going on physiologically? But in terms of the what's happening inside that person's body between a person who is healthy versus a person who is chronically fatigued or chronically ill.

Wow. Well, first, thank you. That was really the nicest introduction I've ever had. Thank you very much. I feel the same way. It's just so much fun to have a conversation with someone who, you know, you just it said that it's a it's a fun, you know, ping pong match of ideas going back and forth.

And that's you know, that's what makes that's what makes life exciting to me is is, you know, having a chance to share. And as you said, the question of what makes health.

It's funny, I, I, when I started in medicine, I really wanted to go there. I wanted to go in what? How to keep people healthy. That was kind of like my.

But that went away pretty quickly in medical school. It just like it dried up and was killed because it was clear that. That nobody would teach me anything about health.

It was all about disease. And I went down that rabbit hole of disease because it was I it was it was interesting. It's intellectually fascinating and also very gratifying when you help people who are really sick, you know?

And but I always had that deep interest in what those days we called alternative medicine. So I after about 12 years of what I call regular medicine, hospital based stuff, I went off and started my own practice and started with, you know, like many people did in those days with lation and thyroid and treating the gut and balancing hormones, you know, and treating a lot of people who I had seen in what it called the regular medical world, who had stayed, you know, who had pneumonia or had their gallbladder out or, you know, had some procedure.

And, you know, the surgeon was happy you healed, but you still been feel well. Mm hmm. So it was beginning to figure out how to restore health. And I was still hesitant to really go out there and treat people how to train people, how to be healthy because what you have done, Ari, is you've really done deep dives into what how to how to sustain health, how to keep people healthy, you know, and I had always wanted to do that.

But basically, I my world was what got people sick and what kept them sick. So I never really did enough into what had into what how to keep healthy people healthy.

And I was confused, absolutely. Because I started off in the diet world, you know, and that was a total mess.

From disease treatment to health restoration

Should you be on a mucosal diet in those days, you know, like a fruit or tearing a vegetarian? I mean, Dick Gregory, Nobody Remembers Anymore, was a famous black comedian, you know, became an Eritrean for a while, you know, sort of like the early days of fasting, extreme fasting anyway, but it wasn't clear to me.

So I kind of stayed out of that and I started just treating sick people because sick people I least could figure out what they needed, you know, I didn't have the time or the brain space that you have to like do the deep dove on all the other things that will keep us well.

Mm hmm. But what's interesting is that over the years I have, especially the last ten years, I have found that actually what really helped some of my really sick people is really you just vary it a little bit, and it really help really, really well.

People stay well. But we'll we'll come back to that. But so the the the so but my my interest is in always been in chronic illness people I always was frustrated because I I'm an optimist and I always think everybody should be able to feel well again.

And that's unfortunately probably not true. But if you have that attitude, you'll keep looking, you know, and we keep and we've learned the the possibilities have been really amazing because in the early days, it was all about yeast.

You know, back in the seventies, it was Candida and parasites. That's what people knew about we. Everybody thought that anybody with chronic illness, they had either some yeast problem or some a parasite.

And then in the nineties, we started to hear about, you know, Lyme disease and that kind of rose and crescendo. And of course, there was always the environmental issue, the toxins that was always on the side.

That was the side piece, the toxins, the toxins, the toxicity in the environment. You know, which has really probably started since well, actually the last few hundred years.

But it really took off in the early 1900s with the rise that the chemical industry and the petroleum based chemicals. And in fact, that's why probably cancer started going up then, you know, as was Dr.

Warburg. I won't I've got to be careful. I can spend too many stories. We won't go with Dr. Warburg quite yet. But so as. As the environment changed, people started to get more ill.

Of course, the diet changed. But in my world, you know, we were doing that detox diet, but that wasn't enough, that wasn't working. And so we kept looking for underlying issues and we found, you know, there was the, you know, various Candida and other yeast.

There was the parasite and there was line. And then in the early 2000s we started oh, it's the is Bartonella was first was published then Bartonella and and a few others that were thrown in there.

And then Dr. Shoemaker's work with Mycotoxins and not just Mycotoxins but, but you know, the some of the toxins from fish and from sea, from sea life cyanobacteria.

And that was a big thing. And then there was the clotting issues. Dr. David Berg did a lot on clotting and Amy Pascal So I talk about my fr, you know and glutathione became and so all these things started happening, you know, together and it started giving us a bigger repertoire because they're all right.

They all apply to some people, you know. And I think I just want to briefly interject. I think it's incredibly important for people to actually understand that history of the trends and the different things that are layers of knowledge that come to into awareness and also along with that like fads, like things that people become obsessed with for five or ten years and then they kind of go away or we learn that they're not really true in the way that we think it is.

And I think it's important for people to just understand that they are in a particular historical context, a point in time at which all of that stuff is still going on and that we haven't arrived at this place of figuring it all out like we are actually.

You know, we look back, whatever it is, 20, 30 years ago and go, Oh, everybody thought margarine was healthy and everybody replaced it, got rid of their butter.

Butter was super unhealthy, and we all bought margarine, hydrogenated vegetable oil, which all the so-called medical authorities and the scientific consensus, quote unquote, all told us that margarine was really healthy for us and it was heart healthy and it was going to prevent the heart disease caused by butter.

And of course, now look how that played out. And I think it's important for people to understand that they are right now in this moment, in a particular point in time, in the historical context of all of these ideas and layers of awareness coming coming in to, you know, insights coming out and mistakes and.

The truth value of all these things is, is not absolute. Okay? But I always tell people, like, first of all, epidemiologic, you know, do not do not run your life by the latest epidemiologic study we mean by epidemiology is just looking at populations and saying, oh, these populations did X and they are either healthy or sick and therefore that is either good or bad and it's just that's what's made such a yo yoing and why so many people look.

I feel crazy about what to eat, and we have to go back to the basic science. You know, we can get an idea of the epidemiology can can guide us to look somewhere, but you need a lot more work before you decide that some diet is the perfect diet, because besides that, there is no perfect diet right off the bat.

It just depends on your body. There's bad diets we can all agree on what a bad diet is, which is basically what most Americans eat. Yeah, it's simultaneously the case that the opposite is true.

Also, we also need to be wary of doing scientific experimentation, looking at things at the mechanistic level, and then extrapolating out of that margarine being a great example of that saying, Hey, butter, this saturated fat causes heart disease.

Therefore we created this butter like substance that's artificial but doesn't have trans fat and therefore will be heart healthy since it doesn't have since it doesn't have saturated fat. Yeah.

And the similarly with like hey these extrapolating from the mechanism levels insulin is a fat storing hormone and carbs spike insulin. Therefore carbs are the things that regulate whether you're fat or lean, which of course we have lots of studies now showing that that is not true.

But there's there's countless examples of where things seem logical based on mechanistic studies, but then in the real world, don't turn out to be true.

Well, that leads us to one of the things we've been meaning to talk to. And I know you're going to go into a deeper dove with the man himself. But Dr. Navy, I was thinking because so one of the things that that one of the one of the parts of the baggage of well, the alternative, which has now become the functional medicine world, which I think functional medicine misses a lot, unfortunately, is functional medicine is stuck where I was in the nineties thinking that, you know, diet, exercise, your gut, your thyroid, you know, your hormones and your emotions are the whole

thing.

Historical shifts in chronic illness theories

And they are until you get thrown off by a toxin or a bug, you know, then that story shifts. And that's the people that I deal with that when that story shifts, you deal more with the people who are thankfully in the continuum of their health, who want to be healthier, you know, though, you I said your breathwork.

I really was so impressed that you actually had that seven or seven course or seven week part of the course for people with chronic fatigue, because most people don't understand how different an animal it is.

Once you've gone off into chronic fatigue that were the things that normally help you backfire but anyway so the so Dr. Novo but I was also part of the functional medicine and alternative medicine world was antioxidants.

Okay because that's another another great example we it's clear from chemical from studies that reactive oxygen species which means having an electron that's a little too happy to join somebody else.

Okay. If in your cell causes damage now, it's also how your body generates energy. So you don't want to shut it down completely. But but we thought that antioxidants in the nineties and the early 2000 were the answer with the panacea.

If you got enough antioxidants in you, you were going to be healthy. I actually think that there's still probably roughly, I'd say, 80, 90% of functional medicine practitioners that are still largely operating in that paradigm. Yeah.

And it's just and I, the thing that got me really confused was, you know, we, I started seeing as what happens, you know, you start off and God is good in the universe.

Whatever your your stories are, you know, you, you get, you know, you start helping people and then then hubris, you think you know what you're doing.

And then people come who you have no idea because they're sicker. And that's kind of what happens when you're in this field for a long time. You just see sicker and sicker people.

So those first tricks or things that work start failing. And, you know, but in the early days, you know, the antioxidant and some of the the mitochondrial support medicines, you know, it was supplements, the coconut hens, the alpha, you know, the alpha lipoic acid.

They're really good. But they were but they help. But when people get sick to the point what I call sick is people who are chronically ill, you've had something six months later, you still have it and it's kind of chronic.

And then your body has shifted somewhere and we have to work on that. But they would come in with shopping bags and box, sometimes literally boxes. I mean, often boxes of supplements they were taking and they were taking them.

It wasn't just boxes. They, you know, you know, the desire to get well, especially in successful people who were well before, you know, these were high functioning people and suddenly their lives were not there.

So they read everything and went everywhere and they collected supplements and they weren't helping them. And that always bugged me. I mean, I didn't understand, you know, what was going on.

And then somebody sent me got your Navy paper in like 2013, and it was like a light bulb went off, you know, explaining that, you know, the mitochondria aren't broken.

See, that was the model we all had and many. And I think that's still unfortunately the model I hear over and over again. People think the mitochondria in chronic illness are in a disease state and most of the time, you know,

occasionally there are people who will stay sick long enough where they'll knock out a mitochondrial mitochondrial gene or a nuclear gene that controls some of the mitochondrial function.

And they will have a dysfunctional mitochondria. But most people, their mitochondria are just responding to a danger signal. And that's basically what the cell danger response is saying, is that your mitochondria not only make energy I know you've spoken about this before.

You know, we all learned about them as the powerhouse of the cell. You know, they are they make energy. And that's was always my model. And what Dr. Nabeel accumulated, not just his, you know, multiple people's research.

I mean, that's what makes him great again, is his ability to take in lots of different people's ideas and synthesize them. Okay. And the idea that the mitochondria were actually our immune sensor, they just sense and they sense change.

I mean, danger is a nice way to put it and they but they sense change and sometimes it rises to the level of danger or danger and sometimes it's just, oh, we have to move, we have to shift a little bit, you know, when the wind is shifting a little bit, what people one of the really interesting things is the mitochondria make ATP.

I mean, that's what we're all taught in school. Mitochondria make ATP. ATP is this is the fuel of the body. That's how you store energy and your muscles use it and well, then it stores it.

Think you're better at this than me in muscles? Isn't creatine the thing that really stores a lot of the energy? I always gotta believe that. Well, you know, the there's kind of different layers depending on which course you're taking that the lens through which they'll talk about this.

But the way they talk about it in a biochemistry course is often different from how they'll talk about it in a in a pathology course where you're learning about disease states, which is different from how you learn about it in an exercise physiology course.

But the creatine phosphates system, from an exercise physiology perspective, the creatine phosphate system is for sort of all out, very high intensity, short duration, bursts of effort, less than 10 seconds.

And then after that, you've got a you you start you start having to tap into lytic pathways. Maybe I'll talk about it in reverse, low intensity and at rest you you should be producing most of your energy from oxidizing fats in the mitochondria to produce ATP.

So no real taxation on the creatine phosphate system and then at moderate and higher intensities you that the fuel is required faster and you've got to shift more towards anaerobic glycolysis, the burning of carbohydrates for fuel and that that largely takes place in a relatively inefficient process outside mitochondria and then at the highest intensity is very short duration, all out efforts.

That's the creatine phosphate system. Okay. Well, thank you. But but actually, that was a good that was like a nice overview of how the mitochondria how we'll talk about how the mitochondria shift what they do because when the mitochondria when we're supposedly purring along at a nice speed okay in everyday life and things are working okay and your energy is pretty good, you know, your mitochondria are burning fats and mostly fats, hopefully fats and some proteins and you know, and you're you're using up your carbohydrates to get into the mitochondria.

You know, it's a chemical called pyruvate, get in there. And in the mitochondria they get converted and are passed on to the electron transport chain to make ATP, which is all well and good.

Now when the mitochondria realize that they're not getting is much of some of the chemicals as they see some of the raw materials as they should. Okay.

Not so much the not not the pyruvate, but lots of other raw materials that come in to be processed. Okay. When that happens, they they notice there's a steep we call the little that something else is using it up and it's usually

probably evolutionarily it was probably a virus.

As we know, viruses have co-evolved with us since we were a single celled organisms and who knows how much we depend on the virus, the viruses to to kind of like give us in the information to evolve maybe.

But that's another story. So anyway, so when the mitochondria senses that it's not getting enough, it begins to turn down its use of ATP, its production of ATP, and it also begins to send some of this ATP out to the cell surface, because normally there's a very low amount of ATP and some of its derivatives on around the cell.

But when the mitochondria sense a little bit of danger, they start to put more outside the cell. And this is probably the first signal of inflammation in the body.

You know, like with COVID, people have heard all about interferon, gamma and all this other stuff. That secondarily that happens later on. The first signal that there's a problem is that there's excess ATP around the cell and.

And and this is also upstream of of hormones. It's worth pointing that out to hormonal changes take those. They happen later. More like hours days to weeks.

And what you're talking about is pretty much almost instantaneous. Yeah. This is how your body knows somebody visited, is it? And you know and like and is it probably fo you know, I mean, it's there and it can be a chemical anything that will that will that will change the flow of molecules into the mitochondria is sensed and their first response is to put out a little halo of ATP which calls in your way.

You know, it starts triggering your whole immune cell, immune immune system at that point and the neighboring cells. Okay. And if it happens in enough of ourselves, we develop what Dr.

Nava and other people call sickness behavior, which is probably a very evolutionary, conserved way of keeping us from infecting everybody around us, because it happens even in single celled organisms.

If they sense that there's a virus in there, they no longer will clump together, they'll split apart and they'll go away from. That to the story. Yeah. Yeah.

It's a it's a fascinating I mean, that's that's what's so interesting about doctrine, obvious thought is because it is deep interest in evolutionary biology.

Why mechanistic thinking can mislead

That's always a check to see if you're good ideas, really hold water in biology, if it kind of looks like you can give the same story over eons, there's probably something to it, you know, again. So.

Yeah, sorry. Go ahead. No, I was just going to remind people that I use the word story for a reason because people put too much faith in quote unquote science.

And I think you can if it's physics. Okay. I mean, you know, Newtonian physics is pretty rock solid. Okay. But but but, you know, but. Gravity, gravity, momentum.

Collisions, it kind of works. You know, it's fairly it's reproducible. We showing that. But biology well, our understanding of biology is not that good.

And people get so hung up on that. Dr. said, Well, what's wrong? I mean, when you start medical school, the famous joke is Half of what we've got to teach you is wrong, and we don't know which half, you know, I mean, it's not a joke.

Well, there's there's there's another layer to that. I mean, we could we could talk all day as as you and I know. But another layer that's worth adding to what you're saying there is I would argue that actually biologists studying other

species know quite a lot in many cases.

And what's remarkable is that we humans have from the time in modern history, from the time where young, particularly if we're growing up in the Western world, we're indoctrinated with the belief that we are separate from all other animal species.

There's there's nature and there's all the other animal species. And then there's humans and the human world that separate to us. And and we don't look at ourselves and we don't analyze what's going on with ourselves in the way that we would if we were biologists studying the human species.

And there's a certain I don't want to digress here too much, but there's a certain level of common sense that we humans apply to every other living thing that we don't apply to ourselves.

So for, for example, if you had a situation where all the, you know, like in the Great Lake Great Lakes in the 1970s, all these fish start washing up on shore with tumors and they start washing up dead.

And the birds that are feeding on fish from the lake start dying and start producing eggs that are too frail. And there are species that are decreasing in numbers.

We as humans, biologists that are studying those animal species, we have a certain level of common sense that we would apply in that scenario where we would go, Hey, I think maybe something's off in the lake.

You know, maybe there's something wrong with the lake, maybe there's something toxic in there. And, and we need to address what's going on in the environment because these fish shouldn't and these birds shouldn't be expressing so much disease and shouldn't be dying so much. And and yet, if we were to apply the way that humans think about humans to that scenario, what we would do is we would set up little hospitals on the shores of the lakes, and we would start administering drugs to all the sick fish.

And we would dump drugs in the in the in the water. We would we would study the biochemistry of the different disease states that are going on. And in these fish and analyze the tissues of the tumors.

And and we'd say, oh, we've, we've found the solution. It's this biochemical that's being expressed too much. And we've developed this drug. It's miraculous.

It stops this chemical from being produced, and therefore it's going to save all the fish. Let's dump this drug in this in the lakes and set up these hospitals where we give drugs to the sick fish, and that will fix everything.

So we we've developed a very bizarre paradigm for treating our own health problems that no biologist would apply to any other species. But again, this goes back to systems thinking again.

Okay, is that so we're saying is that medicine is basically battlefield medicine or most of our advances in medicine have been from war. We really do great when we to in putting people back together again.

Yeah. And that, that works really well with the engineering approach which is what you describe. You have a problem, you fix the problem. Now you don't look really deep underneath because you know, it was a bullet.

You didn't have to look that far. I mean, the fact that it was the war but that we can't do much about. But you know but but what you're describing is a system and medicine never thought in terms of and say never that's not true.

But we got distracted by by the brilliance of our weapons as yeah. Yeah, that's about it. I just ruined Leonard a little Leonard Cohen line. But anyway, B, you know, because we got so good at fixing things when we saw the cause, we started thinking only in terms of A causes B, and we don't go back and what's causing A now when it comes to us and then, you know, our financial, you know, the, you know, now we can blame big pharma and but it's true.

That is true that all the money and all the brains work that way. We have trained people to work that way. If you

want to do a grant for a study, you better have an A, causes B, well, you're not going to get funded.

So, you know, you are absolutely right there. And so but again, that's the problem of one of the issues of human biology, is that we don't look as a systems view, even though people are talking about it now, but it's still not really happening much.

And the other the other big issue is that we do we do studies on mice that don't look anything like a real mouse anymore. I mean, they're so genetically modify or inbred and modify that we can learn A causes B, but what really happens in the system is different.

And also we're not mice. You know, remember, leptin, leptin cures obesity in mice. It doesn't do much in people because we're different. You know, we have similar systems, but we're but we're different enough that you can't learn too much.

So but I'm going to be surprised myself. I'm going to go back to the cell danger response. And linearity is not my strong suit. So so let's let's go. Hey, let's tie a nice little bow on on everything that you've talked about here and just say super succinctly.

If you were going to summarize in a sentence or two, what is the difference between someone who's healthy versus someone who is ill? They're in balance.

Oh, no, actually, both are imbalanced, I should say. Is their mitochondria are functioning as though it's safe. Okay.

Cell danger response and mitochondrial signaling

So safety and danger is the pay and the V and there are safety signals from the brain and there are local safety signals. Okay. And if the danger signal is loud locally, like if you broke your arm, okay, it's a loud, dangerous signal.

Okay. That is very hard. Until that tool that heals, you're not going to be able to turn off all the inflammatory changes that are happening in your mitochondria and in your cells.

Until that heals, but after it heals, you still need your brain to be able to turn off the danger signal because that can get stuck on. So chronic illness is when the danger signal somewhere is stuck on, okay, health is when you get back to a peace time and arm, you know, like things are copacetic.

It's okay your mitochondria are busy sensing and they can because remember you've got trillions of cells so we're not when we think we have to remember is that these mitochondrial things can happen just in your liver or just in a small part of your liver.

That's how you wind up with chronic illness. If these happened throughout your whole body. Well, at the same time, you get septic, you can die. You wind up in the hospital.

But chronic illness is when these things are happening in small portions of your body. Some brain cells, some liver cells, some kidney cells. You know, that's what we have to realize is that we're not a monolith, okay?

We're a mosaic. Okay. So we have cells that are stuck in various forms in various states of this cell danger response. And if we're really healthy, we get to turn most of them.

Either we get those cells to either die or revert back to normal when we stay sick. Some of those cells stay stuck in one or what? Dr. Nahmias created three stages of that, and in first stage there's a lot of inflammatory noise happening.

In the second stage, there's a lot of growth happening. So that's when you get things you can get like, you know, atheroma like, you know, like calcifications in your blood vessels and things because the cells there are going a little bit of inflammation and they get stuck in this like, oh, let's keep making more cells.

You know, cancers are our stage are seed or two and then the KDR three is when the cells have repaired and now they have to restore cells to cell communication.

Okay. Because those when your cells when the cell goes into the KDR one, one of the first things it does is it hardens the membrane. It stops receiving information as well.

Okay. And that's where people start noticing like, you know, their thyroid isn't working or the hormones aren't working as well because some of their cells, not all of them, some of their cells are not responding to the information.

And in KDR two, that's still happening a bit. KDR three is when the cell is learning how to become part of its local environment again. Okay. So and so it's it's important to, I think for people to understand that in contrast to, let's say, a paradigm like the conventional medical paradigm in the West, that sort of looks at disease as mistakes or random chance or as a result of genetics, and that this the stupid body is doing this process of you know, mistakenly doing this thing.

And we need to use our drugs to sort of conquer over nature, to intervene in the dumb accident or random chance processes of the body, to correct it, to interrupt these disease processes with drugs.

So, oh, you've got depression. Oh, it's neurotransmitter imbalance in the brain that just arose for random reasons. Here's a drug to correct your serotonin deficiency.

You've got cardiovascular disease. Here's a drug to lower your cholesterol that your body is mistakenly elevating that will interrupt it from generating atherosclerosis.

You've got high blood pressure. Here's a beta blocker to to change or something that acts on the hormones that act on the kidneys to change retention of water and salt and potassium so that it changes your blood pressure because the stupid body is mis regulating blood pressure.

And in contrast to that, the paradigm that Dr. Navy presents in that you're communicating here from the cell danger response is one of respect for intelligence of the body, that the body is intelligently adapting to these danger signals.

But sometimes it's supposed to complete the healing cycle and come back into homeostasis and health, but sometimes it gets stuck. So so talk to me about like, self-defense.

The body's self-defense and how it can how and why it might get stuck in that position. I this is me, not Bob. Bob, discussion of you. Okay, this is my my story, okay?

Because it's the one I used to think about things is I call it the neurotic tendency of the body because we're all neurotic. I never met a normal person. Okay. And I.

I said that 40 years just listening to people, we're all we're all weird in our own way. Okay, but and what happens? We we we work on patterns, okay? We're pattern recognition.

You know, our brains are really good at pattern recognition, and we're really good at creating pattern. Okay? And what happens is that the system, you get stuck in it's loop and it start, it stops communicating.

So when you have chronic illness, part of your cells are not communicating with the rest of the system. And it's like I say, it's like a bad relationship.

You know, you you you hit, you hit, you hit a subject that, you know, if you talk about, it's going to be ugly. So you stop talking about it. And that's what parts of your body do.

Essentially, they stop communicating optimally with each other. And so then you have organs that are no longer

working as a team. They're no longer working optimally, you know, so and the question is, how do you restore this?

How Do you how do you like you know, what's the therapy that's going to get the parts to talk about? And on here's where another little divergence. You know, Dr.

Nava would like us to heal the way that you would like people to stay healthy, which is sun, earth, healthy food, good water, just just just sending the messages that are through nature is safety.

Okay? I mean, that's it. I mean, again, animals go into these states or actually, you know, amoebas are small little planks, plankton, tiny fishes. If they get into areas where the water is polluted, they're like going to this like half dead state.

Okay. Especially when the organisms are really tiny. We get the fishes. No, but cedar, some shrimp that are so small, they can do this. They just like shut down.

Sort of like people with chronic fatigue on some level shut down where they can't function. Their function is very limited, but they're not dying. It's like it's like in a way analogous to hibernation, in the sense that you're more likely to survive a harsh environment if you sort of turn down the engines and go into a mode where you're you're not allowing so much communication, you're not allowing so much environmental inputs, you're kind of shutting down the systems.

Exactly. And that's that's what that's what chronic illness kind of is on some level is shutting down. So and the way that that these single celled organisms come back is when they get signals that the water is clean again, but they need multiple signals that the water is clean, not just one little signal won't do it.

Because if they just got one, you know, nature can fool you, you know. So they need a lot of signals, too, before they get safe, just like us, you know?

You know, just somebody who slaps you around just because they give you a big hello one day, you're not going to be really relaxed, you know? So it's we need a lot of things.

Your body needs a lot of signals. So it doctor now you like to call his he calls it cell you Genesis. And it's the worldview that I would love to be is that if we and it is true, many, many people will heal if given the right environment.

Okay. I mean, this is why, you know, all the places like the old sanatoriums, you know, not not for crazy people, but for healing. They all in Europe, all over the world, people would go and, you know, the water's special waters, good sun, good food, supportive environment.

And people can heal from lots of things with that. So there's no question, unfortunately, I believe that our world has become so toxic in the last 40, 50 years that that it's still important to do all that that's critical to make to create a safe environment and change and make sure that the diet is clean and healthy and you're getting exposure to sun.

You're actually touching the earth now and then that it's pretty amazing if you can do that. The part of Near Tree, you know I mean these are the signals that our body needs, okay?

And they give safety signals. But as I said, if the local organ is still really screaming, those aren't enough, okay? That local noise will still be sending things back.

And I said, your brain isn't that smart. It goes into pattern easily, you know. And I said, If you ever wondered, look how hard it is to change a habit.

You know, it's we are creatures of pattern. Give a message of hope. Eric. Otherwise, I'm going to have to censor you for creating too many nocebo effects, okay?

Okay. Yeah. No, I mean, it's always, always joke about that, because when I was younger, I, when I was in the nineties, I work with Norm Silly for a year and Norm was very big on positive affirmations.

And I, I've always been like, I don't want that much anyway about my psychology. I was always afraid of them. I don't want that much power. But. But it's true.

Yeah. You know, there is always hope because that's what we do. We offer hope because you can usually find your way through. People don't have to be healed completely.

You know, I worked on cars when I was a kid. People are much easier than cars. You got to do perfect people. You just got to get close because the healing mechanism works, you know.

So even if you can't be in the perfect environment, if you just take away some of the noise, it helps you do what you can.

Safety, chronic illness, and healing states

Nobody I mean, not not of us get to like be, you know, lying on the beach or lying in the woods, you know, like relaxing and being fed because, you know, when you're really sick, you don't have the energy to do it yourself.

It's not like you can just go into the woods and go, I'm going to go camping for the week. You know, it doesn't work. So you have to do what you can, but all these pieces matter.

But then what I have found is that it's like pickup sticks. We just have to find what pieces of what's keeping the inflammation going. Like, one of the big things is we talked before, you know, like the Candida, the parasites, the lying bah bah bah bah.

You know, well, the new one in the last five, seven years has been the mast cell activation, which is really just saying your immune system is pissed off as an aside.

But for some people, lowering that load at the same time lowering the the chemicals or whatever is stimulating their mast cells and also giving them, you know, using medicines or herbs to suppress, take, to quiet them down, to allow the body to reach a point that it feels at peace so we can reestablish control again.

Okay. So the mast cells can learn and maybe you'll knock off some of those mass cell clones that had been really upregulated, because that is the cool thing about the body, is that when cells are making noise, it's unnecessary.

Sometimes we can learn to just let them let them die because many of our many of our immune cells that are stuck creating noise in our system and I won't go into the details because it immunity immunology is is a black hole of information because you know we keep finding another chemical and another signaling molecule every day.

It's just another type of immune cell. I mean, that's the thing we keep you know, we started off with like, you know, mast cells, monocytes, macrophages and T and B cells.

And now we have lineages of all of them that go off to like, you know, four or five and like hundreds in the T and B cells of lineages. So but luckily they're all in a dance together.

And that's the hope is life is about balance and dance and you don't have to fix everything. That's what I really encourage people to remember is when you're sick and you feel hopeless and helpless, small changes, you don't know how your body is going to amplify them into good into good information because that's possible.

You know, and this the sick you are, I think you have to look harder in finding out what I call what's on top, because you can have you know, if you test, you can have a million things, okay.

Because you healthy people and you will find many positive line tests. Okay. You know, in people who were fine.

So, you know, and parasites and you know, because we can live with these these are not these are not death sentences.

The issue is your immune system is embattled and not able to keep them in place. Sometimes we can eradicate some of these bugs for our immune system, but most of the time, you know, we're not a sterile environment.

We can we can live in balance with these guys. But if there's something they're screaming danger all the time, then we can start reacting to things that are, you know, that are only mildly annoying.

Well, like I said, if your immune system most of the time probably is working as a fairly reasonable 25 or 30 year old, but when you start to get sick, it starts to regress.

And many times it winds up like a three year old or a five year old that it just screams if it's hungry or tired, it's going to scream, okay. You're not going to have a lot of rational conversation about why and what you can do about it is just screen it.

And that's what we have to do. We have to find the the insult to your body that's making it scream. And once you take that away, the rest of the system comes back, can come back into place, you know, with healthful, healthful environments.

You know, like I said, the breath is probably one of the best places to start because most people can do that. You know, a lot of the other things are harder, but it's it's always maintaining hope and keep looking because when you go to, you know, you go round here, nobody goes to stand or or goes to Mayo and, you know, they're brilliant doctors, but they're useless because they won't do anything unless you fit in the box.

If you haven't, I mean, no, it's fine to go there because sometimes you do fit into their box. They'll they'll be able to diagnose you with an X and maybe give you something that will quiet down the noise in your body.

And then when you go back and you do the things that will bring health, you'll be fine. You'll you'll go back to health. That's really cool. Unfortunately, people with chronic illness don't.

Usually it doesn't happen that way because chronic illness is multiple factors going wrong at the same or going slightly wrong at the same time. So the symphony is also, you know, and they have a ten year they just they and today what's happened in medicine so people should understand is that you can't if you're in a major hospital, you can't do something that has not been approved for that thing by usually the FDA or if not the FDA, at least the hospital committees, which usually want the FDA to approve it and that you don't need FDA medicine most of the time.

You know, and you're not going to get anything. It's very, very, very frustrating because these people often no solutions for you, but because it's not in the book, they they they literally can't use it, you know. So and, but luckily, COVID, I think, might change that in about over the next five years.

But it's going to take time because the long COVID studies are just beginning. And, you know, they're studying they're not treating anything yet except, you know, parts except the postural orthostatic tachycardia and a bunch of other kind of more foolish medicines that they're using.

But they will. I really believe they will. And by the way, I think that that's my message of hope, is that I think that there's enough I've spoken to some of the people at UCSF who were involved in their early long-covid work, and they're really dedicated, good doctors.

They're from the academic world. And so they're a little limited in what they what they'll look at. But they're but they really want to help. And they have enthusiasm.

And maybe the government keeps giving they'll actually have money and they'll help people. But I'm sorry, we kind of digressed a little bit. I you what you need is if you look at me again, I'll try to be succinct for a summer.

Let's circle back to the mitochondria. So let's say we adopt the paradigm that you've described here and we understand illness as too many danger signals being sensed by the mitochondria and and the self sort of the body getting stuck in these adaptive self-defense mode. Oh.

Yeah. What's the magic way. Well, that's what. What do we do with that and, and how on a practical level, how does it relate to the mitochondria? Can you speak to getting well from sort of through a mitochondrial lens?

Yes, it's I said it's pick up. Okay. Because there is a place where my direct mitochondrial support helps people. Okay. But it's usually when we remove the inflammatory noise.

Okay. Because if, if the and this is my worldview, if the if the bug is still perturbing your system a lot or the virus or the toxin, okay, then when you feed the mitochondria and when you make them stronger, you're just going to make more noise.

And that's why that's why people will tell you that, you know, they they they take some of the you know, they people take nad or, you know, high doses of Coke, Q10, and they some of them feel worse.

You know, they now get most people either feel better or nothing, but a lot of people with chronic illness will actually feel worse when they take things that really move their mitochondria.

Because your mitochondria either are it the ones that are left begin to clean out the garbage. Okay. Because when you're in this state of chronic illness, you don't have enough energy usually or enough.

Yeah. Or enough cells that are actively doing it to really get rid of the toxins that you're making every day. You know, I would say that when you're sick, you don't take the garbage out all the time.

You know, you just like that's an extra, you know, first you eat and go to the bathroom and then you take the garbage out maybe. But lying back in bed is often what people will do, and it's the same thing in the body.

And so when the garbage builds up a bit and you suddenly give more energy to remaining cells that can function, they start trying to process it. And the toxins often, okay, so why do you get sick?

I have to go back a minute because otherwise it's just going to be like magical thinking. Okay. Is that in my worldview, you you know, you can be the big insult, but usually it's repetitive, lots of insults, okay.

Small things. And and in just I want to make sure that that people know the word insult here doesn't mean the way that they use people use that word it it means stresses on the body or things that are causing damage.

I'm thinking mostly of exposures to toxins or bugs, you know, and often a combination of the two because usually your body's designed to respond fine to the bug.

You know, the toxin. Some of us don't do so well. And I think that's the the I'm sorry, I hate to add another point here, but it's just so important. It's the biochemical individuality.

You're all different. Okay? What cured your uncle may help you, but what cured your uncle's? You know, sister in law? And less likely. And it goes I mean, it's just it's just different.

And people and again, medicine doesn't treat you as different. They treat you as though you're all the same. And if we use a hammer on your body, we're all the same, you know?

But if we're trying to help your body heal, we have to work with what you can do and especially with toxic with detoxing. Okay. And that's why so many people will try a detox and worse and get sick because as Dr.

Practical recovery: environment, toxins, and pacing

Poppea my, my, my partner in all things as we say she coined the term pretax because so many people try to detox, you know, when their bowels aren't working, you know, it just doesn't work, you know, or, or you know, or they, or they have issues where they can't sweat and they have to, you know, we have to work on these things and clean up clean up the environment around them, but more importantly, get their bowels working before they try to detox.

But the removing the so detox and getting rid of the really important bug or just tamping it down enough so the body has room because you're trying to get more of your cells online, you're trying to get more of your mitochondria that are working normally, responding to the environment, and able to also then respond well to those signals that you give it, you know, whether it be suckling ants or sun, you know, to work better because remember, sun increases our energy.

I mean, that's like, you know, red light therapy, you know, soreness, all these things increase, our energy in our bodies. So if you find that you crash with these things, just try in less tiny amounts.

I mean, that's the thing that's so important. Don't Give up on what is generally a safe and mild therapy, you know, such as we just mentioned, those kind of things that, you know, I'm not talking about the drug, but don't give up on these things because they make you sicker.

Just do less of them less often. Let your body begin to accommodate again. It's when you change quickly, the body reacts. It might not be safe anymore when you're healthy, okay?

And not even healthy. To be fair, this is why go back to the psychology people like me who have a little A. D. D.. Okay, we like change. I like different.

My body responds to different with a ha. But many, many people don't. Many people prefer order. They need things in a certain order. They need their day structured and then they feel safe and good.

And if you're like that and you're chronically ill, you have to have respect and not try to do too many things because any change your brain, you forget about the you mitochondria in your cells, the the mitochondria and the whole brain, the higher level controller of your immune system, which is that's what you're that's what you feel safe.

Okay. You feel safe if your desk is clean, you know, that's good. So make sure that your life is like that. Don't try to shift what you, you know, don't do too many new things, you know, go slow respect your fear, don't give in to it, but respect it.

You know, I think that's so important that people really respect who they are, what it is their body can tolerate. You know, there are many people who are ill are athletes.

Well, there are different cattle. I mean, I don't think people like you realize the rest of how the rest of us are, you know, like you can work out, I don't know how many hours a day or do whatever, you know.

And like, you know, I'll, you know, 20 minutes. And I my line is that when's lunch? You know, I'm tired, I'm done. You know, we're different and and we have to respect that.

And that's a big part of the healing journey is finding is is you have to be brave enough to try something because I know people hit that point where trying anything is scary because I did it and it made me sicker. But doing nothing, unfortunately, generally doesn't work.

If you've done it for a while, you know, I'm not all down with doing nothing for a week or two, but have you been doing it for six months? It's not going to be a winning strategy.

You know, you have to try things and you have to keep open. And so getting back your mitochondria are your friends. What they need is just like you need a safe place to live, okay?

They are usually not broken. I think that's the biggest lesson of Bob to me is that you do not usually have a mitochondrial disease. No. Dr. Navarro is an expert in mitochondrial diseases.

You know, that's what he study. Inborn errors of metabolism is a fancy anyways, is a set of them but he in mitochondrial disease in general is in is his area of expertize and he found was that most of the people with chronic illnesses didn't have mitochondrial disease.

Their mitochondria were working in the normal fashion, but they were stuck in one of these in this cycle where they're either creating too much inflammation, they were creating too many new cells or they weren't communicating, you know, and they were well, actually, the mitochondria weren't also in the mitochondria don't communicate, which is another story.

They actually change shape, but they go from connected spaghetti like things to like what he calls meatball like really separate. And they have to they have to go back to that spaghetti like form to produce enough energy for you to feel good.

So and so we have to do all the things that Ari teaches. I mean, that's the point. I mean, that that's the beauty is your whole worldview is how to heal your mitochondria.

And if but if you're too weak to do those things, do them as little as possible and look for what else is happening. Because if you do have, you know, I mean, I don't want to overemphasize it, but, you know, that mold exposure, if you're living with mold or colonized with mold, you're not going to get better until you get out of that environment.

I mean, I wish that wasn't true. That's the thing I hate the most. I hate mold because I don't I don't like to make people disrupt their whole lives. It it's terrible. But anyway.

But I mean, so you have to be real with yourself and be willing to do deep dives and find doctors who will work with you and think with you. And we don't know everything we know.

None of us can be an expert in everything, you know? I mean, so just understand, if you're seeing someone who's really good, you know, and you're kind of stuck, you know, ask because, you know, or read and get other advice and work around it because it's the medical model.

You know, I tried to get this across. There are line doctors who think everybody has Lyme and chronic fatigue, doctors who think everybody has chronic fatigue and you know, cell doctors who think everybody has mass cell and, you know, mold.

It's just don't forget about adrenal fatigue and adrenals. Yeah. That's one of the things that I mean, I really love to agree on their adrenal fatigue because yes, your adrenals could need support, but that's again, that's not your only problem.

And that gets that people. Yeah, it's adrenal. Your adrenals can be overused and ridden hard, but if you support the rest of your system, they're going to start working like they're supposed to.

Dr. Gordon, I want to I want to wrap up with one thing that we haven't touched on much. I think we went over it one time in passing, but I love your thoughts on this topic, and I think it would be important to sort of complete this conversation and this this this story, this paradigm that that you've given to people here.

And I would like to talk to you. I would like you to talk about the power of the mind and intentionality and the placebo effect in this process of healing.

And if you can connect it to to the mitochondria and the the story that you've presented here. Well, that's that's very interesting, you know, because I said I'm one who who used to kind of disparage, not disparage.

I always believe I mean, I like the placebo effect, but because I had patients who had who had failed so many

therapies and had spent, you know, life savings on therapies, and then they would respond to someone and they'd go back to their doctor and he'd say, that's a placebo effect.

And, you know, I think you know that. So that's why I used to have a hard time with the concept because like, come on, give me a break. You know, this was the this was the dollar 50, you know, supplement.

And, you know, the $10,000 fancy medical treatment did nothing and this is the placebo. So anyway. But intentionality now that is something I have seen to be so important and actually it wasn't directly in medicine that I saw it, but I but I see it every day in medicine.

I guess I can go. But, you know, I don't I don't want to I that's too long of a story. So let me tell you how I see it in medicine. Is that the a lot of people have the desire to heal.

Okay. But to truly have the intention is is a lining up of energy that is difficult for most of us to do because, you know, we've grown up in a culture that is fractured it.

You know, it always had. I am not blaming American culture. All culture. Okay. Once we left the tribal level. Okay, then you have control issues, okay?

Because once you get more than like, you know, I don't know, 40, 80 people living together, then you have to have a lot of higher. You start having hierarchy and you got guilt because you got to you got to take care of you know, you lose the you're not operating from joy anymore.

You're operating from coercion on some level. You know, it's unfortunate, but that's what happens. The duty to the other becomes not the person in front of you, but some concept.

And then we start to coerce ourselves. And so the being able to really line up your being is hard because there's lies in there. There are places where you wanted something that was good and didn't do it.

You didn't do it because people told you you would be bad if you did it.

Mindset, intentionality, and the placebo effect

And and in my worldview, there are sociopaths out there and really bad people, but telling them not to do bad things doesn't work anyway. And most people want to do good.

Most people, you know, they want to hold the door open for you. They want to help you with whatever they you know, they don't want to maybe spend their life serving you, but in everyday life, they want to do to do good deeds with for each other.

It's just a joy when people serve each other, you know, and when that is your intentionality is working and a joy is working and a desire to serve. You know, I think that really allows health to blood to blossom.

And and you have to bring that to yourself because when you're when you become ill, you know, yeah, it's harder to serve to to really take care of other people.

But then you have to bring that to yourself, okay, that place and find that joy in you, which is, I guess I always hesitate to tell people this, you know, like I remember how I feel if I have a stomach cramp, tell me to have joy in myself and I might want to slap you.

You know, I said, well, it's it's understated, but you, you know, even in it. But you have. But if the suffering doesn't go away and you keep living, then yeah, you got to find something in it that you can that you've got to find that place that's quiet, okay.

And you don't have to. You can just stay in the suffering. But I don't have a whole lot of options for you. You know,

you can stay in the suffering, you know, all the time or you can visit the suffering, but occasionally give yourself places where you can just, you know, think of something that gives you joy.

Okay. And I'm talking not only about happiness, that's a whole different thing, but that the the the way I can feel joy is how I feel. Just when I you know, that look, when you look in a baby's eyes and you just smile, you know, that's just joy.

There's nothing. What are you going to get? You know, there's no training. There's just being okay. And it's the beingness that is, to me, the ultimate, you know, that the body is safe. Mm.

And so I love that. I love that I want to, I want to stop you because I want to end on that note because, you. Know, I know that I want to stop you because I think I would elicit it. Let's, let's, let's stop there.

Let's let's leave people with that, because I think it's a really profound thought, too, to think about is, is, is really getting back to that place without so much busyness, without so much stuff to do and all.

And it could be momentary. Remember that it's momentary. You don't live in joy. Yes. It comes and go. But tasting it that tells you mitochondria at your core, okay.

That it's safe and that will help them heal and and stop defending you against what they don't need to defend. Yes. Okay. Fighting they're fighting. You know, they're like the Japanese soldier that was found in, you know, like still fighting on Guam, you know?

I mean, like the war is over. There is a book that ties into what you're talking about that I want to recommend to people. It's a little bit esoteric, so it won't necessarily appeal to to everyone.

But I want to mention this because it ties in nicely with what you just talked about me. Find the name of it. I have it on my bookshelf, but I don't want to go searching for it at this moment.

It's by a a a French spiritual sort of meditation teacher named Daniel O'Dea. On the air is how you spell his name ODI e r and he wrote, he's written a number of books which are excellent to that I want to recommend.

One is called The Doors of Joy 19 Meditations for Authentic Living. And the one that I really want to recommend is called Desire. The Tantric Path to Awakening and the word tantric will scare off a lot of people in that title.

But it really actually what's described in this book are essentially micro practices about getting more in touch with the presence of your sensual experience in life.

That doesn't mean sexual experience. It means the sensual experience of when you drink water, don't do it mindlessly. Like actually really feel that water going into your system, have a visualization of these molecules of, water filling your cells, hydrating your cells, your cells functioning well.

Take some moments to just feel that. And, and it's presented as practices very much in the way you just described that are this is not meant or implied to be your way of being at all times during the day.

You're going to go back into thinking mode and your ego is going to go into what needs to be done, what needs to be fixed. That's very normal and from an evolutionary perspective, obviously evolved for for an important reason because it's adaptive, which a lot of people forget.

But these tastes of these micro practices to come back into just presence of the sensual experience. When you drink water, when you take a breath, don't just breathe mindlessly, take a couple breaths and imagine millions of little smiley faces filling your lungs and those smiley faces of oxygen now going from your lungs into your blood and then filling your body and flooding your body with this tingly sensation.

Closing reflections and where to find Dr. Gordon

And now your cells, your mitochondria, turning on and producing more energy, your brain, your heart, your liver, your intestines, your muscles, all of these these mitochondria now producing more energy as a result of this breath. If you just take five or 10/32 micro practices like this throughout the day, I think it's a really profound way to inject some some safety signals into your day.

And and it's free and it's easy. And thank you. That that's that's that's beautiful. That's so I love this this is is the saving grace. Because though for those of us who are not great meditators, these small things can be so powerful.

You know, there are the people need to sit all day, God bless. But many of us derive incredible help and from just momentary meditations, you know, we're all I said, we're different.

So don't get hung up on prescriptions. Find your way. Dr. Gordon, as always, it is an absolute pleasure to talk with you. I always come away feeling smarter and more knowledgeable and notes.

And in all seriousness, I really every time I have a conversation with you, I feel like I learn some things, I gain new insights, and it helps me sharpen my own views on things and my own paradigms and conceptual frameworks to just to, to to play ping pong, as you said, with, with the way that you see things.

So thank you so much. And to everybody listening, I hope you enjoyed this brilliant talk from Dr. Gordon and Dr. Gordon. Also let people know where they can follow your work or get in touch with you if they want to work with you.

Don't so Gordon medical dot com. Yeah. Just if you want to just I think if you go there and if you're hit I think it's info at Gordon medical or something and you can talk to Rachel who is our new patient coordinator, care coordinator and she can be really helpful that people have questions and make sure we're the right fit because there are so many great people out there and I, we just like to we want to make sure that we're going to be useful in the world.

But thank you again, Ari. Again, it's new ideas all the time. And yeah, going going deeper. And I look forward to your interview with Dr. Navarro. I'm it's going to just be like, okay, then people will get to him.

He'll be he'll be much more linear about it. And and exploitative. So I urge people to to take a listen. Thank you so much, my friend. I look forward to our next conversation.