Introduction to Dr. Elizabeth Mumper

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And My thought is that parents know their child best, you're the best advocate for your child, and I want them to feel confident in asking the hard questions and not blindly trusting what they are told.

This is Dr. Talks. Hi, everybody. It's Dr. Nancy O'Hara again at Demystifying Pan's Pandas. And I know you guys hear me say every time how thrilled or excited I am to have somebody join us.

But today, I mean it from the bottom of my heart. Not that I have meant it all the time, but the person I'm talking to today is an incredible clinician, an incredible doctor, an incredible writer, and a dear friend of mine, Dr.

Elizabeth Mumper. Dr. Mumper is an extremely valuable member of our community. She attended the Medical College of Virginia, did an internship at the University of Massachusetts.

She did residency training at the University of Virginia. She was a chief resident there. and for many years had two practices, Advocates for Children and Advocates for Families.

And Advocates for Families is her practice devoted to the care of children with autism and other neurodevelopmental problems. She's been in clinical practice for many, many years and won numerous awards, including the Miracle Maker in Central Virginia, Woman of the Year in Health and Sciences, and several inspiring change awards from the MIND Foundation in Australia, as well as a Lifetime Achievement Award from the Frontline COVID Critical Care Alliance.

She's written many book chapters about allergy, immunology, behavior, development, And she's just recently published a book, Kids in COVID, helping us to understand the costly mistakes that must never happen again.

And it came out in May of this year, 2025. She has lots of interest in the medical problems of children with autism and other neurodevelopmental problems.

And she's just an amazing person. So Liz, thank you for joining me. Thank you for making me sound so great, Nancy. I appreciate that. Well, you're just not your best advocate, Liz.

I got to tell you, you are an incredible doctor, an incredible writer. And I have to say, your knowledge base in everything that our country, our world, and particularly our children went through with COVID is really unmatched.

And people will be thinking, oh, COVID, that's over. Why do we have to talk about it again? Why is she writing a book on it now? But there are so many lessons for us to learn from it that I really do think it's important.

And not just because you mentioned me on page 138 of your book, in case anybody wanted to know. But why did you write this, first of all? Well, in the very beginning of COVID, it just never made any sense to me the things that were being done.

I am not an epidemiologist. I'm a clinician. But it never made any sense to me to, with a respiratory virus, to shut down a healthy population. And even without looking into it, I thought to myself, coronaviruses, a lot of the cold viruses kids get are coronaviruses.

I bet you they have some cross-reactive immunity. Then the other thing I thought about was, you know, kids are pretty good with innate immunity. I bet they might do better.

And why is nobody talking about stratification of risk?

Why She Wrote Kids in COVID

Which would basically mean that if you're 85 years old and you've had three heart attacks and you've got hypertension and diabetes, you're probably at more risk than a toddler who's already had a couple of coronavirus infections, has good vitamin D and vitamin C levels, hopefully, and will probably weather the storm.

Early on, I was a little bit worried about infants because, you know, with RSV and other respiratory illnesses, especially in the first few months of life, Infants do have small airways, and sometimes they do get compromised airways and trouble breathing.

But the first few kids I had with COVID just breezed through it. And honestly, the way I identified that they had COVID was that their brother or sister had it.

And I was just testing them, and they seemed pretty good. One of them had a little pink eye, the other one had a little runny nose, but they really were not sick.

So I am very interested in child development, as are you, and I started thinking about the impact of closing schools as one example. So for many children who are socioeconomically disadvantaged, school is a place where they have a teacher that tells them, you did good, I believe in you.

you're getting this, you're learning. They may come from a situation where they live in poverty or there's domestic abuse or even child abuse and all of a sudden all those sort of checks and balances on that were gone.

You know, the kids that got their best meal of the day, although one could argue that there's a huge amount of room for improving child lunches at schools, at least they were getting some calories in, and then all of a sudden they were left in these poverty-stricken families to maybe not get enough to eat.

And to the extent that a school community can serve as a place where child abuse or neglect is identified, all of a sudden that wasn't happening. But even children who weren't neglected or abused previous to the pandemic, I wondered about this idea of locking them in the house with their parents who were so stressed from losing their job, having to wear masks, wondering about having to take these new injections and all these outside stressors that come when people are sent away from their support network.

You know, that does not make for ideal parenting. And caring for children and toddlers is exhausting when you do it 24-7. So there were just so many things about the public health measures that I thought would be harmful to kids.

I use the analogy in the book about being a Cassandra. You remember that Cassandra was the Greek goddess who could foresee the future, but nobody would listen to her.

She couldn't do anything to change it. So I spent the years of the pandemic, you know, sort of ticking off all the things that I was worried about that were coming true.

And I want that never to happen to another child. I don't want healthy adolescents missing their prom or missing being able to play on the soccer team because of a similar pandemic.

I don't want babies to start seeing faces that have masks on them, and it is so confusing for them when they're trying to learn emotional regulation. with the next pandemic.

And I don't want toddlers and elementary school kids to be off the playgrounds. They need to be outside. So the goal of the book, we can't do much about what happened in COVID, but we have to learn from the mistakes.

And we have to have the grassroots learn. We have to have the parents learn. It's not just a matter of the health professionals or the government officials learning.

It has to be a grassroots movement of never letting this happen again. Yeah. And I so love the way you wrote about it in the book. I mean, so many of the chapters, you have questions at the end, you know, food for thought.

It's a lot about asking people to be curious, to ask these questions, which you and I in functional or root cause medicine, you know, we're used to doing things that way, but it's asking everybody to do that.

Just let me ask you a couple of questions, because I think from just listening to you these first couple of minutes, I hear some of my parents going, yeah, but okay, so my father is 85, obese, has diabetes, has heart disease, and he doesn't live with us, but I'm worried about us being out and about and exposing him.

So how would you answer that person? I isolated my kids because I wanted them to be able to be with my parents. What do you say to that? I think that's very altruistic and a very noble goal.

But when you look at the cold hard science, and this science came out relatively early in the pandemic, children really were not the vectors of illness that people had supposed they might be.

They were not like Typhoid Mary. And it is true that coronavirus was pretty contagious because eventually everybody on the planet pretty much got it except for perhaps a few that had lingering antibodies from the SARS outbreak in 2002. But the kids really weren't that much of a risk for the adults.

The biggest risk factor in adults was really the adults co-morbidities. And so I am more worried about that grandfather you've mentioned with all his comorbidities, but it is really unlikely that the grandchildren would be the ones that were responsible for him getting sick.

Yeah. And I think that goes to the whole idea of the hygiene hypothesis. And although I know the practitioners that are on understand what that is, maybe you could explain that a little bit more, because you talk about research by Bach and others about the role of the hygiene hypothesis.

And you even mentioned Sweden that did it very differently. So could you talk about those two a little bit? Yeah, well, in one of my lectures early on in COVID, one of my first questions I posed to the audience is, how can a child eat dirt when they have a mask on?

And it's basically this idea that I want my patients to be digging in the dirt and making mud pies and playing outside and running barefoot in the sand or on the grass so that they get that wonderful grounding.

Children, Risk, and School Closures

because people in cultures that have a lot of contact with dirt tend to have less autoimmune disease and less allergies, and kids that grow up on farms where they're feeding the chickens and slopping the pig pen tend to also have less allergies and less autoimmune illness.

So we are a part of our world in many, many ways, and we are meant to live in compatibility with the dirt and the animals and our microbes. So one of the things that I did not like about the lockdowns was this emphasis on washing your hands all the time.

You know, we took a perfectly innocent song, the happy birthday song, and turned it into a timer for how long you needed to scrub your hands. And I know that in my patients, they ended up being much more afraid of germs and much more afraid of other people as vectors for germs than I want them to be.

I want them to get the idea that we have good germs in our guts that do a lot of good things for us. make vitamins and help us digest our food and move our stool through our intestine.

And yet the kids that were toddler and elementary school age, I think, got a very different message there. You mentioned Sweden. You know, I so admired the public health director in Sweden, who got so much criticism when he came out and said, you know, our approach is going to be to protect the elderly and the vulnerable.

And yes, for old people in the nursing homes, we're going to be more strict, but we're not going to close our schools. And by doing that, they proved that they did not have any more COVID than other countries that did masking and lockdowns and all kinds of things to try to temper the spread.

And what happened in Sweden is what I had hoped would happen here, which was that the young, healthy people kind of took it on the chin. They got COVID, they made antibodies, and then they didn't spread the infection as much.

It was brilliant. And when they actually looked scientifically at their school cases for both children and teachers, they did not have more COVID deaths in their kids or their teachers than a lot of the other countries who had tried to institute these very draconian methods.

In fact, they did much better. It's very ironic that the rest of the world followed the United States because we literally had about the worst statistics in the world for morbidity and mortality, despite the fact that we spend more money than other developed nations.

So I really regret that other places like Australia and Europe and Africa were pressured to take advice and follow our lead because we really got it quite wrong.

Yeah. Yeah. And you've mentioned masks a couple of times, and I know you mentioned masks in little babies, but we also know that in the children with autism that we take care of, their face identity recognition.

You know, you mentioned a study by Weigelt, I mean, and there are several of them, that talk about the problems with masks specifically in that population.

Can you talk about that a little bit more too? Yeah, so kids with autism don't look in our eyes as much as other children do. And they tend to look at the mouth and whether that's part of them trying to process the language that we're saying or what all the reasons are, I'm not sure about that.

But it was very disorienting to them to have the part of the face that they look to for the most clues about how the adults around them or the kids around them are feeling.

It was all covered up. And as you know, many kids with autism have difficulty with identifying emotions. And so now we're going to take away more than half of their input on that and expect them to know when we're getting annoyed with them or when we're really happy at something that they did.

So masking was just a disaster in that population. And that's not even taking into account the fact that most of the epidemiologic studies showed that masking did not really help stop the spread.

There are a number of reasons for that. One is that a lot of kids didn't wear the mask correctly. They'd wear it over their mouth, but not over their nose.

Or adults, for that matter. Or adults for that matter, or they'd loop it under their chin in between. But the fact is that this particular virus was so tiny that the typical cloth mask in particular, or surgical mask, did not really stop the particles from going through.

And most of the studies that looked at why masks might be helpful were looking at sort of models where they looked at how many particles came out of a sneeze, for example.

But with a very infectious virus like coronavirus, you know, you don't have to get. billions and billions of particles, you can be infected with far fewer.

So masking was tough, tough on kids. And some kids said they couldn't breathe when they had the masks on. You know, especially the kids that had asthma or reactive airway disease, they would really feel stifled by them.

Or anxiety. Or anxiety was huge, yes. And speaking about that, you talk a lot about the mental health issues. You know, you've mentioned some of them just by the stress of being locked down, the stress of not being able to be with loved ones, the stress of losing jobs.

But there were many other mental health issues associated with COVID. And I sort of want to talk about it, because this is demystifying Pan's Pandas, a little bit in COVID and Pan's and COVID and MIS-C.

So can you talk about both of those a little bit more too? Yeah, I'll definitely tie it in with pans.

Hygiene Hypothesis and Masks

So among the many mental health issues was a steep rise in suicide that happened very shortly after the pandemic began and was thought initially to be related to people being closed off from their peer groups or their loved ones.

But I think we have to think about another intriguing possibility, and that is that we know that one of the things that spike protein does to people is it crosses the blood-brain barrier.

They deliberately, when they made the so-called vaccine, which I think of as a gene therapy product, they deliberately enclosed the spike in a lipid nanoparticle, a fatty particle that would surround it and allow it to cross membranes.

Every cell in our body has a double layered membrane. And lipid nanoparticles were originally developed to try to get medications into the central nervous system, like for kids, people that had brain cancer.

So both with COVID the illness and COVID the vaccine, I worried about brain inflammation, just because you and I have been treating brain inflammation for almost 30 years now or more.

and it's always at top of mind. So here's a postulation, you know, was one of the things that happened in COVID that people who presented with mental health issues, and we saw psychosis, we saw anxiety, we saw depression, we saw suicidality, we saw hallucinations, you know, how much of that might have been a pan's type pediatric autoimmune neurologic manifestation.

And I've not seen a great study on that. Maybe you have, but I certainly suspect that that might be the case. Yeah, and there are several case studies, and you present several case studies in your book also, you know, on different disabilities that people have had from the COVID injection, from COVID itself.

There's three whole pages of different studies on this, but we saw the same case studies you know, in pans and COVID. The other thing, whether it be the spike protein or some other way, I think that COVID reactivated other dormant viruses.

We've seen more EBV, CMV and also, especially in our area of the country, tick-borne diseases. And there definitely are articles that have been written on the increased rate and incidence of Bartonella and Babesia, particularly since COVID.

I think they're related. I think this reactivation is part of it. And definitely the neuroinflammation is key to what these kids are going through. And we have several studies that have been published where kids got admitted to psych hospitals for severe psychosis, got tested for COVID, which they didn't even know they had.

and got IVIG or monoclonal antibodies because they were hospitalized and had COVID and their anxiety and psychosis went away. You know, they're not true true and unrelated.

Those facts are very related. I totally agree with you. And the other thing we saw was reactivation of herpes viruses

where people would get shingles or have a chicken pox type rash.

So I think that you're really on to something there. And the MIS-C for people that may not know is a multi-system inflammatory syndrome in children, which is what they eventually called the pretty rare, honestly, situation in which kids ended up in an ICU because they did not do well with COVID.

Yeah, yeah. But all of them are inflammatory, neuroinflammatory reactions, correct? Right. And one of the big advances in psychiatry now is that we are starting to recognize the role of both systemic inflammation and abnormal gut flora diversity and composition in mental illness.

For example, certain types of E. coli are really necessary for you to make serotonin, which is the neurotransmitter that makes you feel happy. And if you're low in those E.

coli, you are more likely to be depressed. Yeah. Yeah. I mean, you know, the gut-brain connection, if we haven't recognized it yet, you know, any of our listeners or people that are watching this, you know, that is something we have to understand.

I mean, you talked about living in the dirt and eating dirt, you know, harder to do with a mask on and all of that. We talk about all the good germs that our gut needs for neurotransmitters, for neuromal immune system, all of that.

and also diet and nutraceuticals. I mean, some of the things that you and I talked about at the very beginning with viruses in general and with COVID in specific were things that kids needed, nutrients, vitamin A, vitamin C, vitamin D, you know, that they needed in their guts and therefore in their bodies and their brains.

I remember very clearly in the middle of March, back in 2020, our hospital had a big meeting of all the medical staff in order to sort of make a plan for the, you know, how they were going to handle this huge influx of patients, which ironically didn't really happen that spring.

And we ended up with like a ghost town hospital. at least in my city for a while. But even then, I had read some research out of China about the value of vitamin C, and you and I are both big vitamin C proponents.

Our colleague, Paul Merrick, was the one who did the seminal work on the use of IV vitamin C for sepsis, and he was able to show that it cut the mortality rate more than by half.

We're both followers of Sid Baker, who was a follower of Linus Pauling, talked about the extraordinary value of vitamin C as a master antioxidant. And so I went to the microphone and suggested that that's something that we should look at.

And it was never done in our hospital.

Mental Health, PANS, and MIS-C

And physicians weren't really telling people to take vitamin C or to keep their vitamin D levels up, even though one of the papers that came out suggested that people that had a vitamin D above 50 rarely did badly with COVID.

So I felt like the older I get and the longer I do this, you and I both kind of go back to basics. And the basics were never emphasized. The advice to stay home till your lips turn blue and then go to the ER when you were an extremist never made any sense to me.

I really thought we should be working on prevention. Pediatricians, that's supposed to be a big part of what we do. Yeah. Well, I told this story before, but two of my friends are invasive cardiologists in a very poor small town with lots of people with diabetes, obesity, hypertension, very, very high risk communities.

And they gave all of their patients in their practice a paper bag. And in that paper bag were vitamin C, vitamin D, vitamin A, and a couple of other very innocent, very good medications to use in prevention.

And that was it. And not one of their patients got admitted to the hospital, let alone pass away. And yet their paper that they wrote about their experience was removed from publication right away, as we know many were, because it was misinformation.

So I think the biggest thing I get from your book is the cautionary tale. is that this isn't a depressing book. This is a book that really asks you questions and asks you as the reader, the listener, the parent, the practitioner, to be curious, to really think about what's behind stuff and what we can do about it on an individual basis, not just a societal basis.

I really wanted to empower parents and, you know, one of my messages is you really can't trust what the government spokespeople are saying and you can't necessarily trust what your newscasters are saying because there's so much interference from special interests that profit from people being sick.

And parents have amazingly good instincts. You know, mothers particularly have this evolutionary superpower, really, where they know their child the best and they have a gut instinct about how to protect them.

And people were made fun of if they were trying to use nutraceuticals, they were gaslighted. There were a lot of what I'm going to call propaganda techniques, which are now being remarketed as marketing techniques.

that were adopted by the government and the pharmaceutical industry to disempower people and to make them defer to authority figures. And my thought is that parents know their child best.

You're the best advocate for your child. And I want them to feel confident in asking the hard questions and not blindly trusting what they are told. Yeah.

And I think that's a good lesson also for things we've heard in the news recently. And I would like you to address, because I've addressed with my own mentees and members and patients, you know, Let's look at the science.

Let's not look at the messenger. Let's not look at the politics. Let's not look at TikTok or even Instagram. Let's look at the science. And I'm talking about what recently was discussed about acetaminophen.

So do you want to address that in any way, Liz? Yeah, so I was very happy with the press conference, particularly the part where Secretary Kennedy and Dr.

Bhattacharya and Dr. Makari talked about their decisions about warning labels on acetaminophen. Now, I looked back at this, and Nancy, you and I have known about this since about 2003, 2004, I think, is when we were first talking about it at the Autism Research Institute.

And there was some very compelling correlational research then about a higher risk with acetaminophen. So we now have flushed out that science pretty well.

One of the things that impacts it is that many children with autism have a difficulty with their sulfation pathways. Sulfation is one of six or eight or 10 or 12 ways that you can detoxify.

And there's a particular enzyme called phenyl sulfur transferase that helps kids detoxify acetaminophen as well as salicylates and dyes. And as many as 85 to 90% of kids with autism just don't do this well.

And that's why a lot of the therapies you and I have used over the years include ways to improve the sulfation pathway from something as simple as rubbing mag sulfate onto the skin to telling kids to eat more onions and garlic and fennel because that's nature's way of helping sulfation.

So we know that the kids that are impaired cannot detoxify acetaminophen into the appropriate metabolites, breakdown products. So some kids with autism, especially if they were told to give acetamin right before and right after their vaccinations, at a time when their mitochondria are going to be stressed, were not able to break it down appropriately.

Nutrients, Prevention, and Vitamin C

And we have to wonder about how many of the mothers of those children with autism also had difficulty with sulfation and were ending up with a toxic metabolite that their fetus was exposed to.

We know that that toxic metabolite has been identified in fetuses. Another thing that happens in pregnancy as well as in autism is lower levels of glutathione.

And you and I love glutathione. It's, you know, the master antioxidant. It helps with your gut lining. It helps with your immune system. It helps your mitochondria.

But it's also like the gateway to detoxification pathways. And pregnant women typically have about a 30% depletion in their glutathione status during the pregnancy.

And then acetaminophen depletes glutathione by about 30% also. So all of a sudden, you are giving acetaminophen, which is very dependent on a downstream process from glutathione, And the mothers and the babies are not well equipped to take care of that.

The other thing I want to raise, though, is that I don't think President Trump looked at the nuances of this very well, because I worry that some people might have thought that he was saying, if everybody, you know, follows this recommendation and quits taking acetaminophen or Tylenol, we're going to be able to wipe out the causes of autism and nothing could be further from the truth.

It is one of many environmental exposures that we need to be concerned about. So I do think that it's really important and I'm sorry that the message hasn't gotten out in the last 20 plus years.

I bet you have had almost as many calls and messages as I or not more saying, you know, what's the story on Acetaminophen? You know, friends and relatives are coming out of the woodwork to ask about that.

So it is one part of the exposome. I love the fact that J. Bhattacharya used that word. The exposome is all of the stuff that our children are exposed to, you know, air pollution, heavy metals, you know, viruses, tick-borne illness, ultra-processed foods, you know, the list goes on and on, glyphosate.

So there are many pathways to get to autism, and that's why you and I often say that it's not autism, it's autisms with an S, with many ways to get to that final stage.

And I want to mention a couple of things along those lines. Our kids that are genetically susceptible to Pan's Pandas may also have some of these same detoxification, sulfation defects, and others may too.

It may not just be our children with autism. They may be our canaries. As people who've listened to this podcast know, I always say, I grew up in West Virginia.

We sent canaries into the coal mine. If the canaries died, the mine was too toxic. That's part of that exposure zone that all of us are exposed to. It's just our kids with autism may be more genetically susceptible to it.

I was just going to say the other common sort of genetic susceptibility in terms of looking at their single nucleotide polymorphisms is the PANS children and the children that are destined to have autism tend to have problems with their inflammatory pathways and their ability to regulate inflammation so that You can get an acute inflammation, which is actually helpful for healing, which is great, but you don't want to go into chronic inflammation.

Right, right. And we're going to get to that in one minute because you do such a good job of describing what is considered like a persistent cell danger response.

But just a couple of other things I wanted to mention specifically with relationship to this is, number one, yes, you and I have known about this research and the correlation for decades from Jill James and Dick Deeth and many

others' research along these lines.

But there is more recent research in 2024 and 2025 by William Parker and those at Mount Sinai and at Harvard and several different places showing that there…

it may well be because of glutathione and sulfation and other issues, much more than just a correlation. So I caution people, we're not saying this to increase anybody's guilt from past Tylenol taking, but at the same time, I would like people to be more curious and really look at what the science is saying.

To that end, I will be talking with Dr. William Parker, who has done a lot of this research. And I think all of this, again, as Liz said, helping each of us to be our own investigators and to understand it.

Great advice, and I'm going to tune in to hear Dr. Parker. Okay. And then you mentioned the mitochondria, just for our parents out there that might not understand it, or even some of our practitioners who forgot their biochemistry and everything else.

You know, the mitochondria are the most sensitive parts of all of our cells of our body, and they are affected by so many things. toxins, medications, including acetaminophen, but others, risperdal, valproate, they're negatively impacted by poor nutrition, poor diet, back to the dysbiosis and the gut and all of that.

So the mitochondria, pretty much any symptom at any age in any organ can be mitochondrial dysfunction, but the mitochondria take the biggest hit when there's any trigger, COVID, anything.

And why they take the hit and why there's a problem in some people genetically, genomically, is because of this persistent cell danger response theory.

that you and I know that Bob Navio put forth many years ago. Can you describe that? Because I think as it relates to COVID, as it relates to acetaminophen, as it relates to so many things, it's a very important piece for people to understand.

Acetaminophen and Autism Risk

Yeah, well, the cell danger response is a radically different way of looking at chronic illness from a typical medical model that relies on pharmaceutical agents to treat particular symptoms associated with chronic illness.

And the basic idea is that when a mitochondria is threatened by all the things you mentioned, or by heavy metals, or by this weird spike protein being able to penetrate into its cell membrane, it tries to contain the damage.

And we think of the mitochondria as the powerhouses of the cell, which is certainly true, but really their responsibilities are so much more wide than that and have a lot to do with cellular messaging and regulation of the immune system, for example.

So when they realize that they've been invaded, they tend to batten down the hatches, they stiffen their membranes, they send out little messages to their friend, their mitochondrial friends.

And it's so weird to think that there may be like 10,000 mitochondrial friends in every cell in the heart. But they say, watch out, stay away, something's bad, don't come here.

And then to oversimplify, they squirt out bleach to try to kill the invader. And you can very much get locked down in this cell defense mode. And you teased me a lot about my love of University of Virginia basketball, which is famous for playing a suffocating defense.

And my analogy is that Yes, they are great at playing defense, but if they can't shoot baskets, they're not going to win games. And the same is true for the cell.

If it gets locked in this totally defensive posture, it quits making proteins. It quits sending out messages about how to advise certain immune cells to do their various jobs.

And one of the things that was very interesting in COVID is the idea of the mitochondrial cells that need to commit suicide in order to save the organism.

And so there's this very tightly regulated process called apoptosis, where when a cell has outlived its usefulness, it essentially kills itself in order for the rest of the organism to thrive.

And one of the therapeutic options for people that have long COVID is to potentially try to work with that process so that once a spike is trapped inside a cell, is there a way to kill that cell and therefore kill that spike in order to help the total organism thrive?

And so that's an interesting area that we need to look at. But when you think about the symptoms of long COVID, which is disabling fatigue, you know, people who were CEOs of big companies who can't get out of bed, or a mother with four children who used to, you know, be the room mother to the school and take care of her kids and, you know, do her home cooking and bake her own bread and all of a sudden she can't get out of bed.

That is mitochondrial disease until proven otherwise. And I think that spike protein was a terrible mitochondrial stressor. And I think that the spike protein produced in response to the genetic instructions from the injections was a severe mitochondrial stressor.

So we have to do things to restore the integrity of the cell so that the mitochondrial think it's safe to go do their work again, which is basically running every cell in your body.

Does that make sense? Yeah, and that's basically going back to, well, how do we do that? Well, we do that with good nutrients. We do that with good exercise.

We do that. And Bob Navio and others, Pax Medica, are looking for other agents that may turn the switch. this purinergic switch that may turn off this persistent cell danger response.

But in the meantime, we just have to do everything we can to, whether it be in COVID or with other insults, viral or toxic or whatever they may be, we have to do everything we can to support our bodies to be able to manage this.

Right? Yeah. Mitochondria need vitamin C, for example, as part of the process where it goes from complex 1 down to complex 5. Mitochondria need B vitamins.

Riboflavin and niacin are particularly very important. They need oxygen, which is one reason why I'm so excited about the prospect of using hyperbaric oxygen, which is basically oxygen under pressure, to help mitochondrial function in a wide variety of illnesses where that might be an issue.

CoQ10, otherwise known as ubiquinol, is something that people can take to support their mitochondria. And something we've been using in kids with autism for a long time, L-carnitine, is essentially like a food for the mitochondria.

So just because you've got this very disabling fatigue and You know, some people might say, well, I don't really know why you have that. A good bet would be to start supporting your mitochondria as one of the first ways to start feeling better.

Yeah, and I think this is true not just in long COVID, but any chronic fatigue, long tick-borne disease, you know, chronic Lyme, ALS, autism, so many different disorders, learning about this persistent cell danger response and learning how to feed the mitochondria well also helps to decrease the inflammation and the persistent immune issues that many of these people may have.

I agree. So, again, it's in the book, page 267 for anybody who just wants to go by the pages.

Mitochondria and the Cell Danger Response

I want to list one other thing from your book that I found so fascinating, and I think this, again, has other projections into what we go through with other diseases.

And that's deaths due to COVID, which there were many and horrible, but deaths that were listed as COVID that may have been incidental to COVID. And I think that's an important distinction.

And I didn't want to forget about that as we're talking. Could you just mention what you meant by that in the book and for other diseases too? Yeah, so hospitals were incentivized to do COVID testing on everybody that came in, and they would get more money for COVID hospitalizations.

And kids that may have broken their arms or had a bike accident would test positive for COVID and didn't necessarily have any symptoms. And we know that some of those were false positives.

But when people were filling out death certificates rather than listing you know, myocardial infarctions secondary to heart disease with diabetes, they would essentially upcode the COVID to be higher on the list.

And COVID was perhaps one of the triggers or one of the complicating elements, but it really shouldn't have been listed as the primary cause. And Marty McCary, who is now the head of the FDA, was one of the ones that did the research on kids.

When he looked at hospitalized kids, he found that 45% of the kids listed as having COVID were not there for COVID at all, and their hospitalization really wasn't impacted by COVID at all.

It was an incidental lab finding. It led to a lot of misclassification for sure. And that led to some of the fear mongering that led many people to estimate the mortality or chance of dying from COVID as much, much, much higher than it really was.

I've had parents tell me that they thought that if their child got COVID, they had a one in two chance of dying. Well, the closer statistic is somewhere between 1 in 1.7 to 1 in 2.5 million.

And those were typically kids who had something horrible like cancer or immune dysregulation as an underlying cause, not healthy children. In fact, it was impossible at the time Dr.

McCary did his study for him to find a healthy child who died of COVID. Yeah, I mean, your book has a lovely little graph in it that there was a 99.9987 survival rate in children.

99.9987. I mean, I often say there's a 99.99% chance of, you know, it being, that's just… astronomically low and I get it there were children that were impacted and many many families that were majorly impacted but I think what this book does for me and should do for so many people is just help you it's an easy read I obviously reread it again this weekend my second read but it's a way to really Just get yourself in that mindset of asking questions so that people are really thinking when the next disease, because there are many of them, there are viruses coming down the pike every day, and we hope we never have another pandemic.

But I think all of us being prepared with just being, again, I've said it three times now, but just being curious is helpful. So, from your perspective, Liz, how can we, as practitioners that maybe are very curious, learn more about this?

How can we get this message out more? What do we need to do? Well, as you know, you and I are very invested in the educational content at the Medical Academy of Pediatric Special Needs.

And honestly, I think that is the place where this type of medicine is taught. That's where we're taught to think about root cause. That's where we teach how to think of your patients on a cellular level and not as an organ system, like having a heart problem or a kidney problem or a brain problem.

And I was just at a conference this weekend in which one of the speakers challenged us to think of something that we really wanted to do to leave a legacy that was hard and that we had no idea how we'd do it, but to actually say it out loud and commit to it.

And the thing that immediately popped into my mind was, I want to have the Medical Academy of Pediatric Special Needs go global. and teach clinicians everywhere this way of thinking until it becomes standard of care for pediatrics.

So I'm putting it out there to you all. I've gone on record saying that that's what I'm going to be working on. And fortunately, I've got amazing colleagues to help me on that path.

Yeah, it's a great organization. And to learn more about that, it's medmaps.org, M-E-D-M-A-P-S dot org. And if you are a practitioner listening and if you are curious, please come.

And practitioners of all ills are welcome. DOs, MDs, naturopaths, health coaches, chiropractors, nurse practitioners, PAs. Who am I forgetting, Liz? I always forget one group.

If I forgot you, you're welcome too. Yes. Therapists, nutritionists, dieticians. People with some kind of diploma on their wall. That's a good way to put it.

Yeah, and just, you know, we are there to help you learn what root cause medicine is so that we can fulfill Liz's dream of making that the standard of care.

Incidental COVID Deaths and Misclassification

So I think that's a wonderful, wonderful dream, Liz. And I think it would also be wonderful if more of our listeners and watchers got your book. Where do they get it if they're interested?

It's available on Amazon.com and it's available on Barnes and Noble.com. Unfortunately, with the publisher that I used, which I chose because they were going to contribute to Children's Health Defense with the profits, does not get it into bookstores directly.

So that poses a bit of a barrier. I'm also going to be carrying it around with me to any conferences that I speak at the next couple of years. And so if you come to one of the VAPS conferences or you come to some of the other conferences, where I speak, you may be able to get it there.

If you do buy it from Amazon, please review it for me because the more reviews that Nancy and I have on our books, the more likely it is to come to the attention of the powerful people who have the ability to make policy for children with these problems.

So that would be great. Yeah. So Liz, I could talk to you for hours, obviously, and we will off air, but for everybody that's listening or watching, do you have any last words of hope, of wisdom, of anything that you'd like to share with everybody?

So for the clinicians, I'm going to go back to a mantra that I've used for my whole career, which is, look at the baby, listen to the mama. It is so important to listen to parents, to believe what they say and not to gaslight them and disbelieve them just because they tell you something that you don't know about or hadn't heard of before.

And for the parents, I would say you are your child's best advocate. Trust your instincts. And if a healthcare professional seems to be trying to coerce you or bully you into doing something, you should probably walk away and reconsider someone else.

Lessons for Practitioners and Parents

Well, Dr. Elizabeth Mumper, you are an incredible clinician. You wouldn't bully anybody out of the room. And you

listen better than anybody. And it's a wonderful book.

It's a wonderful message. And I so appreciate you being on today. Thank you, Nancy. I really appreciate the opportunity to reach your listeners. Until next time.

Bye, everybody. Thank you for tuning into Dr. Talks. We hope today's episode has enlightened and inspired you on your path to optimal health. Each day is a new opportunity to make choices that empower your well-being.

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