The Perfect Storm: Long Haul and Toxicant Exposure and how to protect yourself Transcript

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Introduction to environmental medicine and long COVID

– Hello everybody and welcome to this episode of the long haul chronic fatigue summit. I'm so happy to have with me today. Dr. Lynn Patrick. She is a naturopathic doctor and a pioneer in environmental medicine.

She's published in peer reviewed medical journals. She's authored a chapter in the book in the textbook clinical environmental medicine in 2019. She certifies doctors in their training of environmental medicine.

This is very important because it is technical, it's a specialty area just like we think about rheumatology, orthopedics oncology, any area where you need a specialist, we need training in environmental medicine. Dr. Patrick has done just so much for environmental medicine and for doctors for learning and she just continues to do so.

So thank you so much for being here with me Dr. Lyn today we're gonna have a conversation on the impact of environmental toxins on long Covid. This is not discussed enough and who better than to bring on board than to have this discussion within Dr. Patrick herself. I'm so happy to have you here.

– Thank you Dr. Parpia for that extremely generous introduction. I really appreciate it. So yes, that's my area of specialty. I have been doing this work for a little more than 20 years.

I teach in several fellowship programs and for physician member associations and I have been a contributing editor for Pub Med Index Medical journal called Alternative Medicine Review but most importantly I've had the opportunity to practice environmental medicine and that's what's given me the impetus to do this work. So in April of this year in 2022 I gave a talk at a conference that I actually produced called the environmental health symposium and the talk was called the Perfect Storm of Covid and environmental toxic and exposure. And the reason that I titled it the Perfect Storm is because I really believe that it is a perfect storm that this virus and the problems that we're now having. The unbelievable tsunami of long Covid is not just that.

And I published an article I think in the Townsend letter with Dr. Annemarie fine earlier in 2021 called Covid. Is this an issue of virology or toxicology? And what I was referring to with that title is that we think of infections as these things that drop out of the sky and hit us on the head.

We have no basic ability to determine the course of events that happen after we get hit with that infection. And that's actually very far from the truth and very far from reality.

And what's being left out of the conversation among, not just the general population, but among physicians is why is it that some people get long Covid and others don't.

Now, this is, you know, as you know, I'm sure you've looked in Pub Med, there are thousands of articles on Long Covid right now because it's estimated that up to 30% of people who have had an infection of SARS Cov to get long Covid.

So there's some damage that's occurring, but not to everybody. So what determines the people who get sick and get better and the people who get sick and don't get better. And we used to think well the sicker you get with the Q. Covid, the more chance you have of not getting better. But actually the studies that are coming out now. So that that's not actually the case.

It is determined by how much virus you actually get hit with at once.

How toxins, autophagy, and mitochondria affect long COVID

So if you get hit with a whopping dose of you know spike protein then you're more liable to incur some damage that might be long lasting. But everyone reacts differently.

Right? You might not get really sick with that acute covid but you might end up with some serious long strips of quality. So as you can imagine I've been contemplating this ever since March of 2020 when I got Covid and started noticing people getting sick around me and have been reading the litter literature. Excuse me pretty voraciously.

And I've come to some conclusions and I would like to share them with you. So yeah. So you and I know that there are several specific types of damage that occur in long covid.

Right? And I'm sure that your other brilliant presenters are talking about this but just for the sake of reviewing let's talk about them because you might have some interesting things to say.

So the first thing is that and I think this is really important for people to understand in terms of therapeutics as well is that people with long covid have an interruption in the way that their cells die and are released from their body.

So we have this really, I think quite elegant way that our ourselves get recycled because of all ourselves are born and die within as much as three days.

Our cells inside our mouth only live for three days. Right? So this process called autopsy ji is not only the death of an old cell in the birth of a new one, but the recycling of all of that material, all that debris, all that garbage that has to be taken out of the body.

Right. We have this elegant way of our immune system coming up in and acting as the garbage disposal crew and pulling all that detritus out of ourselves. Unfortunately, that beautiful process is interrupted in long covid. And so not only do we have um an incomplete cycle of cell death and celery birth, but we've got a lot of garbage that's not being taken out. Right. That's the problem with the top Fiji.

And that's the fancy name for this beautiful elegant system. Instead we have something called necrosis which is a not as clean system of cell death and an incomplete removal of the cellular debris. Right. And so that's appears to be pretty consistent in people with long covid.

And I think one of the brilliant strategies. I'm sure you're going to have one of your speakers talk about this for improving autopsy gee. And increasing that innate capacity for cellular repair and removal of dead tissue is intermittent fasting. Right?

And I heard Dr. Merrick talk recently Paul Merrick, who's just an incredible he's been an incredible pioneer in this entire epidemic. – He has been. – And I heard him say because he treats lots of long covid. That inducing autopsy gee through intermittent fasting was probably one of them is gonna probably be one of the more successful approaches to covid.

So the reason I want to bring this up is because this is also happening in a very specific part of the cell called the mitochondria, the powerhouse of the cell where energy is produced. And one of the problems with long covid is that there is a break a breakdown in the machinery of the mitochondria.

So the mitochondria can't produce a DPS as efficiently or sometimes very inefficiently. And the mitochondria like everything else in the body, they wear out they die and they have to be reborn and they go through a process called mitophagy which is the analogy of autophagy right?

Only it's just the mitochondria. So this is where my specialty comes in is that in chronic fatigue syndrome and fibromyalgia. And in so many other conditions, the mitochondria cannot do their job. So they can produce energy.

And when you can't produce energy you become extremely fatigued, you also get inflammation and pain as a result. So when we look at why does this happen? So why would mitochondria lose their capacity to do the job they have done for literally mitochondria been around for millions of years in humans and other animals.

We have to look at what can actually damage the mitochondria. You know what what inputs, what exposures can actually damage mitochondria. And in our world right now there are a lot of external toxicants were exposed to that can cause mitochondrial damage.

And I don't know that there's a hierarchy of toxicants, but definitely some of the most damaging are the metals so exposed to mercury, lead, arsenic and cadmium as well as many other metals on a daily basis. Number one through air pollution, number two through our food supply, number three through the water we drink and number four, unfortunately through the soil. So that's there's so much research on this Dr. Parpia that it's basically their scientific and census on it, that metal's damaged mitochondria and as a result of that damage mitochondria make excessive amounts of what we call free radicals which are very damaging, damaging little electrons that are basically jumping like out of control, ping pong balls into tissue, including, you know, cellular machinery like mitochondria and wrecking havoc.

So I would love to do this research, but there's no funding for it is to look at the toxicants load of individuals who have long covid, I would love that versus the toxic unload of individuals who who don't have long covid. So metals are definitely on that list, but there are other toxicants I'd like to talk about as well in this context.

But first, I think it's important to really talk a little bit about recent history in the United States. Just to go back five years. – Okay, – 2022. Let's go back to 2017 or so.

And look at what's been happening in the United States of America in terms of our toxic exposure and specifically for those of us that live on the west coast of the United States.

So even starting as early as the middle of the 2000, so 2015 as a result of the warming and the drying of the West coast of United States, we've had significant amounts of forest fires and extreme exposure to wildfire smoke. And we think of wildfire smoke is just kind of dead, you know, combusted trees, but that's really not what it is anymore.

So wildfire smoke is much more complex.

Wildfire smoke, PM2.5, and cardiovascular risk

And I actually, I have lectured on this specific topic for physicians at conferences because we know so much more about wildfire smoke and how it affects not just our lungs, but our entire immune systems and our cardiovascular systems as well, because we now know that the air pollution in wildfire smoke increases risk for stroke significantly and heart attacks as well as vascular damage.

So cardiovascular disease throughout the entire vascular system. So it's something that we have to take a look at. We can't ignore it. And the tricky part about this, the tricky part about um what's in wildfire smoke is and I want you to think about, I'd like everybody to think about it using this analogy.

So you've got a little combusted particle of let's even say structural wood from a home and we think of that as a cinder. But really wildfire smoke and building smoke is much tinier than that.

We call it PM 2.5 and that 2.5 indicates an extremely small tiny little micron. So think about the width of a hair and something that's significantly smaller than the width of a hair that's not even visible to the naked eye. So that's the size of these small particles floating around in the atmosphere.

But the tricky part is that they're like a little ping pong ball that has velcro on the outside and sticking to this velcro are metals like mercury and cadmium and arsenic and lead and hexavalent chromium. For those of you that remember the movie Erin Brockovich, that's another pollutant that's in our water and our air.

But these little ping pong balls with velcro can also have pesticides and herbicides and particulate matter from air pollution stuck to them. So they really are a vehicle for many, many pollutants to get into our bodies.

And not only our lungs, but these little tiny PM 2.5's get into the areas in our lungs where they can't get out. You

know, we can't exhale them And there are particles smaller than 2.5s that actually get into our vascular system and can end up in any organ in the body.

So these air pollutants that we breathe in, don't just get stuck in our lungs, they get stuck in our central nervous system, our brain, they can get stuck in our liver, our spleen and pancreas in our muscles, basically anywhere. Now this is very conventional science, what I'm talking about right now, very conventional toxicology.

There's nothing controversial about this, right? And so how is this connected to long covid, Well, how it's connected is there was a study that was done several years ago looking at the relationship between how much of this PM 2.5 is in the air and the increased risk for covid in that area.

And this was done in 92 counties in the Western United States. So literally the entire state of California, Washington and Oregon. And what they found out is that for each one micron that's a way of counting how many particles you've got in air pollution that you have as account, you know when for those of you that actually look at the air pollution.

Particulate count. You can look it up. The E. P. A. Has a kind of live streamed online by uh location listing of what the PM 2.5 count is at any given time, you can look at that. And so for every one micron increase per cubic meter in air pollution, PM 2.5 there's an 11% increased risk for getting SARS-COV-2 Meaning being symptomatic right now, that may not make any sense at all. But let's get look for an example like Oh let's say San Francisco. And for those of you that live in San Francisco, you remember when San Francisco turned orange right in the wildfire?

– Yeah – There's in 2020. So during that time the particle count went from 35 up to 500. So when you do the math on that it's about a five I think a 400 times increased risk for getting covid.

Just because you're inhaling that particle pollution. – That is a very, very large number that I just want that to sink into our audience because I want to make sure that number tell that number again.

Well represented. – Times 400 times approximately. 400 times increased risk for coming down with covid because of that significant. Now remember it was only at 500 for I think three or four days but during those three or four days that was a time when people who already had asthma, kids who already had asthma or adults who already had COPD had significantly higher risk because of that particular condition or that particular disability. So much of what we talk about in environmental medicine is, what are we gonna do about it, right?

We cannot stop the wild fires from occurring right now. We don't have the capacity for doing that, but we do have the capacity for actually protecting ourselves from that particle pollution. One of the things that I'm convinced is no longer just a luxury is to have air filtration inside the home as well as water filtration.

Right? So this is something that's not talked about in general medicine, but especially for families who have respiratory illness in their family, it's even more important or cardiovascular disease in their family because we know that that this particle pollution significantly increases risk for incident meaning having a stroke or a heart attack. So, I think that getting back to our original little analogy about autophagy and mitophagy. We know now that this particle pollution actually damages ourselves, right?

It can actually alter the function of those little powerhouses of energy. The mitochondria that are so crucial for our functioning, you know, at we have lots of mitochondria in our heart, but we have more in our liver and the liver is the detoxification organ, right? The main one of the main organs of detoxification and the kidneys and skin. And so we have to support that, particularly right now that organ of detoxification.

So, I I think that there is a very close connection between uh toxic and exposure and coming down with the virus. Now we don't have an excellent study that we both wish we had on the predictors of long covid from toxic exposure but we do have a good idea and I'm going to talk about another thing that's very common in long covid.

Folks, we do have a good idea of why long covid patients long haulers have the kind of damage that they do. So, another thing is mass cell activation syndrome, which I know you're very familiar with. Right?

That is something that is seen in long covid. So mass cells or little cells that are they've been around for a very long time and there's somewhat of a sentinel cell, you know they detect danger and warnings, right? And they are activated when there's danger in the environment and they can wreck havoc in human bodies by causing you know massive headaches and rashes and all kinds of problems, swelling, inflammation, pain, everything.

But for a very long time we've known that toxicants like metals cause mast cell activation. There are a lot of in rental toxicants that will actually create a situation where mast cell activation will happen spontaneously and otherwise you don't need a trigger. It just happens because you've got toxicants on the inside of the body that are internal that will trigger that mast cell activation at any moment in time. And so we know there are other things that will trigger MCAS as well mast cell activation syndrome, like Lyme infection, chronic Lyme infection, mold exposure, mycotoxin exposure.

Mast cell activation, lead, and vascular damage

So I don't want to limit it just to those non biologic environmental toxicants because those are important as well. But I think we forget about the common environmental toxicants who were all exposed to at low levels every single day.

– I think what you're bringing up here is very, very important because many patients have massive activation syndrome. At least my patients do those who have chronic line, those who have or will say post line or those who have autoimmune conditions and then they come to me and they say, but its mass cell activation that I have, that's what I have. But actually mass salivation is secondary to primary drivers. People are now beginning to realize some of those primary drivers can be infections. So we're hearing that being spoken amongst the doctors are talking about infections, but what is not being spoken about is environmental toxins as being a driver from mass cell activation syndrome as well.

It's like this piece that nobody is looking at. So I'm really happy that you're bringing it up. I mean there's there's there's massive activation summits, right, this is this buzz word and it's an important one, but people think it's a primary issue. Secondary and toxins are a huge contributor to it. – Right? And the funny thing is Dr. Parpia that this literature on mast cell activation and metals in particular has been around for decades.

So it's it wasn't just discovered yesterday. It's just that for reasons that I think I don't want to get into the politics of it. But but for reasons that I think do have a lot to do with the whole uh trying to downplay toxic and exposure in the same way that tobacco companies really tried to downplay any kind of inherent danger in cigarettes, right? We want to downplay the inherent danger in metals from air pollution or medals from amalgam filling or metals from other sources.

We want to really try and push that into the corner and under the rug and we really can't do that anymore because I don't know that just good old lead.

You know, people think, oh that was in the past, that's not a problem anymore. In 2019 a wonderful researcher named Bruce Lamphere published a study looking at a huge database the Center for Disease Control puts together every couple of years and he identified that about a half a million people a year in this country die from heart attacks and strokes because they have too much lead in their body.

Half a million. – That's a lot of people. Let's talk about people talking about where the lead comes from. I think they think it's not in gas. So how can that be right?

– Right. So according to Dr. Anna Jarvis Asean who's one of my mentors, she works at Columbia University and does wonderful research and environmental toxicity specifically for lead and arsenic.

Anyone in the United States that was born before the year 1990, which was what I had always been told. But 1990 has a body burden of lead that contributes to their risk for cardiovascular disease and neurologic problems. So that's a lot of humans.

Where does this lead come from? Well historically we put a lot of lead into the atmosphere from leaded paint and

leaded gasoline. And sadly that lead did not just magically disappear. It's recirculating in the air and as we know from Flint, Michigan in the water and a little tiny bit of it in our food mostly it's in our air and in our water and it literally is still in our atmosphere And then in our bones it's an art comes from our bones.

So for myself I was born in the 50s so I have a significant amount of lead in my bones. And when I became menopausal that lead then migrated from my bones and into my bloodstream. And my lead level actually went up and I know this because I measured it and that's common for women in the United States when they enter menopause is for lead to lead levels to rise in the blood.

– And so, oh yeah, be it all the time in my patients who have menopause in menopause we're just entering it. They wonder why their lead is high now. But it wasn't eight years ago, five years ago. That's why.

– Yes. So so this is interesting because now we're getting into the category of problems in long covid related to vascular damage. Right? We know that despite protein is a toxin that's very clear in the literature that its effect on the entire vascular system.

And you know, there's this beautiful little lining of our vast vascular system. Little tiny specific cells that line our vascular system that are similar to mast cells even though anybody who's a cellular biologist or physician and the audience is gonna go, no that's not a good analogy. But the thing about the lining of the vascular system is that it's very reactive to toxicants. Not only do the cells are the easily damaged but they will release a lot of inflammatory cytokines.

Right? And so with that happens with the spike protein. And so we get a lot of inflammatory cytokines are just little cell proteins that our alarm bells. That can cause a lot of damage.

And so we know that that happens in long covid, well, guess what? It also happens when those vascular cells, those epithelial cells are exposed to certain toxins like lead and like bisphenol A which is a very common toxin in our plastics that we all have 93% of adults in the United States. And I think a similar amount of Children have significant levels of B. P. A. In our urine.

We test in urine and we never think about this being a problem with either the vascular system or the immune system, but both lead and B. P. A. R. Toxins for both the vascular system and the immune system.

And so this problem with clotting. I know you've seen it in your patients who um have long covid when for some reason right there. D diners go up that that is reflecting a problem in the blood with micro clotting. That is not good because not only does it prevent the blood from oxygenating all the tissues, but it can also lead to clotting problems like strokes, mini strokes, aneurysms etcetera.

So I think that's another situation where we've got a lot of toxicants were exposed to that contribute to increased clotting in a number of ways, not just fiber in. Again, you know, there are a number of pathways through which this clotting can happen.

And we don't think about that. So, you know, this is just another way in which we've got this perfect storm happening. – Right? So we're thinking about toxins that cause immune dysregulation, inflammation, inflammation, the blood vessels that can aggravate a system that already is being flooded with spike protein.

And now we've got the perfect storm. – You right. And there's there's 12 more areas that seem to be consistent in long Covid one of those is auto immunity that either people have autoimmune conditions and they seem to get worse after they have covid and they have long covid.

So their autoimmune conditions seem to become more um they either will multiply meaning they'll get new autoimmune conditions or the autoimmune conditions they had before will progress.

And so we don't think about toxicants and auto immunity. But even the researchers in the National Institutes of Environmental Health Sciences. So that's the big department under the NIH that looks at auto immunity.

The director of that department actually admitted that most autoimmune diseases caused by toxic and exposure, not by genetics. When when did he admit that he's no longer in that position, Fred Miller was his name.

But he actually was quoted as saying that that the majority that the large majority of autoimmune diseases are environmentally cost.

Autoimmunity, BPA, and immune dysregulation

– I mean I will say that when I measure my patients who have measured the toxin levels in my patients who have autoimmune conditions, they're typically very high. And when I when I apply the appropriate detoxification strategies for those patients, the Autumn Unity reverses.

– Yeah, that that is uh that is it's not just you Dr. Parpia. We have some data to show that that is the case that when you lower the toxicants body load, you'll also get a significant decline in the auto antibodies and what the reason that there's a very basic reason for that.

We make antibodies to foreign proteins right foreign material. So when a toxic in comes in, I'm going to get very specific when a toxic comes into our body will make an antibody to that. Like bisphenol A.

That plasticizer that I was speaking about. We make antibodies to B. P. A. We can measure them their tests to measure anti BP A antibodies. Now if that BP A somehow has connected to or is stuck onto a human meat protein a protein of mind then the immune system will recognize that and start attacking that meat protein as well. And this is pretty basic conventional science right? We know this for sure happens these foreign proteins that attach to human tissue and and so this is an actual mechanism for how auto immunity happens, how autoimmune diseases happen.

And I know that the two most common in long covid lupus and M. S. You know I don't want to get into great detail about it but there there are toxicants that can cause lupus and an M.

S. And there's good data for that in animal research. We have a model for M. S. We have a model for lupus and we can create those diseases by exposing animals to those toxic substances. – Dr. Patrick, will you be able to share that data with our audience? – Those studies? Sure. I can find them.

Absolutely. Yeah. – Yeah. – Yeah. So I think that's another another example and you know when I was putting together this talk you know the perfect storm long covid and toxic and exposure I came across a study on B.

P. A. The study was specifically about B. P. A. And its ability to increase risk for SARS Cov two infection. I who actually work in this field, couldn't believe it.

I was like what are they talking about? I have never heard this before. And there's a back story to this. So backstory is pretty fascinating. So in Europe there's a group called FSA European Food and Safety Authority and they're kind of like the FDA in the United States.

Not exactly, they don't do the exact same things, but they create policy around food. And so they had been doing a lot of research in bisphenol A. And looking at what is the safe tolerable daily intake for bisphenol A. And they had gathered hundreds and hundreds and hundreds of studies and they had many um scientists that were basically advising them. And they came out with a report last year showing that the tolerable daily intake was actually thousands of times lower than it should have been.

And they published this as a regulation. And so as a result of publishing this, the the European union is actually gonna create some regulations about B. P. A. One.

And as a result, when this came out, this fc uh regulation came out about the tolerable daily intake for um for B. P. A. There were a whole group of scientists in the United States that wrote a public letter to the FDA and said well we're pulling the curtain back on the Wizard of Oz here. Emperor has no clothes.

You can no longer pretend that B. P. A. Levels that you say are safe are actually safe because we have the same situation here in the United States. And so now the FDA is backpedaling very quickly to try and figure out what to do. Because if we look at the amount of B.

P. A. And I actually did the math here just a few hours ago. If we actually look at the amount of B. P. A. In the adults and Children in the United States and we look at How much is safe according to FC to we're getting 5000 times more BP. A than they actually say a tolerable doses. But here's the kicker.

All this this entire determination was made on the basis of how BP A poisons the immune system. All the studies were immuno toxicity. Right? And they said the effect of B. P. A.

As an immuno toxin was so much stronger than its ability to cause kidney cancer, reproductive harms risk for obesity, risk for diabetes, which is significant that they had to base their total daily intake. They're tolerable daily intake on those immuno toxicity studies.

And that's why the researchers wrote their paper on does B. P. A. Increased risk for a viral infection? Like SARS Cov2. – So yeah E. P. A. – EPA. We all know well most people have heard of bisphenol A. Or B. P. A.

They've seen little cans of soup that's A. B. P. A. Free. They may not know the B. P. A. Is in their thermal receipts that they get from the cashier at whole foods.

They may not know that B. P. A. Is very high in canned coconut milk that it's in our personal care products. It's in our makeup makeup that we wear. And that it can be a contaminant in our drinking water as well.

Can you tell us about organic makeup? Yeah. There are manufacturers of beauty care products that do label their makeup B. P. A. Free now because makeup is kind of there's no police. The FDA doesn't police makeup.

Don't go look looking at lipstick to make sure that it doesn't have lead in. It makes lipstick has a lot of lead in it. The redder it gets the more lead is in the lipstick. And so the cosmetics industry is left to police itself. So I had this conversation with a researcher Todd Hagopian, who actually published a study in women showing that if he taught them, educated them how to get the B. P. A. Out of their lives there would be less in their urine. And they would actually lose weight.

And he proved that in his study in his study. Part of what they were asked to avoid was B. P. A. Containing cosmetics. So the study actually provided B. P. A. Free cosmetics for these women.

And my teaching partner Dr. Anne Marie Fine and I got really excited when we read this study and we called him up and we said where did you get the B.

P. A. Free makeup? Oh I just found makeup that was labeled B. P. A. Free. And that's what we used. So we don't know for sure whether cosmetics or B. P. A. Free or not.

I imagine that they might be but I can't guarantee it for you because the cosmetics industry literally is self regulating. They write their own rules and regulations.

They do most of the B. P. A. That we get is from our food which is good news because then we can avoid it right? We can avoid canned food. There's one company that actually does not use bisphenol in their cans that's eaten food. So that's the one canned food that you can safely eat all the rest of them have B. P. A. And then or if they C.

B. P. A. Free, they may be using B. P. S. Which is another form of bisphenol very similar. Only a few molecules different just as damaging. – So even if it says B. P. A.

Free on the can. It does not mean that we're not getting getting some form of that but you're not getting this phenols. So there's a bunch of bisphenol zits alphabet soup literally A., F., S., A. S., A. F., B. I could go on and on.

So it's unfortunately a marketing gimmick to say B. P. A free when you're really using bisphenol s because the animal studies look like it's just as bad as B.

P. A. But anyway, to get back to it. So the other consideration in long Covid is immune health. Right? Because we know that one Covid folks run the risk of having had reactivated viruses specifically and maybe ahh SV six, are you seeing herpes Six in your patients? – A lot.

And I'm also seeing reactivated tick borne diseases, Lyme, Bartonella, Babesia patients who didn't have it before, then they get a lot of spike protein.

You know, they get Covid and then it gets reactivated the underlying infections by using H H. V six. – So at this point it is very difficult to say how much that bisphenol contributes to the immune toxicity. But if we trust FC to the european food safety authority who has believed me nothing to gain by doing this.

The entire, you know, bisphenol are what we call hype production volume chemicals, they're used in extremely high amounts. So I'm sure that FSSA is not winning any popularity contests in the European union right now right. – Right. – So if they are calling it out as an immuno toxin extraordinaire, then I think we need to worry about it.

– That makes sense to me. – Yeah. And specifically if what we're battling is an immune deficiency that I don't understand, you might understand this is created by the spike protein. I know the spike protein that the virus SARS COv2 kind of shifts everything upregulates th 17 down regulates tier egg cells.

You know, it sets it up exactly for someone to get an infection or an autoimmune disease. Right. – Right, right. It causes this flare of inflammatory cytokines and it's that flare that's then stirring the pot of other infections that were previously dormant now reactivating those or it's causing such immune dis regulation that now we're more open to um to becoming infected from other other infection or I'll say from being affected from other infections that were being exposed to the system. Can't keep that in check.

– Or a little Epstein Barr virus that we've had floating around in our bodies for a very long time that we've kept very contained or little HHS V six or V six virus that that now suddenly is out of control.

So I think there's every reason to be conservative in terms of environmental, toxic and exposure and every reason to be proactive in terms of looking at body burden. Like what are the things we're carrying around this play. We're lucky it goes in and out pretty quickly.

So you stop exposing yourself to it. You're not going to have huge depots of bisphenol a in your fat tissue or your You haven't seen that even in autopsy studies as opposed to lead which unfortunately you and I have in our bones, 25% of its in the bone.

PFAS, water filtration, and reducing toxic exposure

So we have to be proactive and actually addressing that. – What you're saying is so important because we have to now think about and we have been thinking about this for our patients with chronic Lyme right?

All of a sudden there's this intersection between chronic Lyme and long covid. So what we have, what I have been thinking about for over the past decade for very similar patients. Those with Lyme is why do you have immune dysregulation? Why is it that your body can't keep that Lyme in check or that Bartonella in check. Why is that?

Because there are many people walking around with lime Bartonella, babesia and their body is able to handle it well of course won't hold. Most of my patients already have a high environmental toxicants load And so they've got this immune dis regulation from say the B. P. A. Or the medals or whatever toxic per chlorate is another one. So they've got high levels of these toxins causing immune dis regulation. And now they're not able to fight off that chronic line or maybe long covid, SARS Cov2 as well as their immune system should be able to completely agree.

Yeah. Look around I – Yeah I will go so far as to say the long covid patients that I have seen that fail. I've I've

remarked in treatment and other treatments um have a body burden. – I will say the same thing. – Yeah.

– Yeah. – The last chemical that I need to talk about because this is so important. And we are just now figuring out how to grapple with this. These are chemicals called perf Lauren, its Lauren it's are a whole family of chemicals that were eloquently the whole kind of situation with per Florence.

If you want to learn quick and easy and fun sort of watch Mark Ruffalo's movie dark waters. Mark Ruffalo, great actor. He plays a lawyer that takes on a client who's a cattle rancher whose animals are dying from a mysterious chemical that's coming up in the water which is from a next door neighbor chemical plant.

Dupont is the name of the chemical company and their manufacturing what we commonly call um nonstick non stained chemicals, Gortex and Teflon, right? And these chemicals now we have just found out as a result of some really amazing research and meetings through the National Academy of Sciences and and a couple of academic universities Contaminate about 2800 municipal water facilities in the United States of America.

So these chemicals are carcinogens, they cause thyroid disease, their reproductive toxicants, they contribute to diabetes and obesity and probably fatty liver disease. They're probably one of the big secret contempt contributors to fatty liver disease. And they're in our water and uh we don't know how to get rid of them. That's the sad part.

They're called the forever chemicals because they're per floor in it. So there's a flooring adam in them. You know, the chemical flooring, the element flooring and a carbon.

And they're bonded together. And these chemicals have been found in every living animal that has been tested on the earth. So in Antarctica, south Pole everywhere, they migrate through air currents, right?

And um the half life in a human being, particularly in a male who doesn't men straight or a menopausal female is somewhere around 27-33 years. So that means it takes that long to get half this stuff out of your body usually takes five half lives to get everything out of your body. So you'd be dead long before you did you were able to eliminate all these performance.

So the main reason I'm bringing this up is that they're also immuno toxic. And so they are a chemical we're exposed to in our drinking water that is significantly caught wrecking havoc with our immune systems and that we have a very hard time getting rid of. Now, fortunately, the environmental protection agency just this year in 2022 issued regulations that necessitate that all municipal drinking water systems in the United States test for per Florence.

So, again, the curtains being pulled back. No more secrets. We're now going to find out how bad things are. But this is another reason that I believe that water filtration is an absolute necessity in the United States of America as well as most countries in the world. Honestly, what's your favorite water filter?

Well, I hesitate to say this um because it's a small company run by a scientist who used to work in the nuclear industry who created a technology to get radioactive elements out of water. But I do believe that his technology is really better than most technologies out there. It's called pure effect filters.

And the reason I say, I kinda hesitate to say this is he's a small company and um you know, he's not like a multinational corporation, so, but I have seen his research and he's really dedicated, he actually has you put your zip code in in his website so you can see for yourself what's in your water, the contaminants that are in your water.

And he's very honest about what it takes to get contaminants out of your water. If you live somewhere where you have water Fluoridation, water's fluoridated, you may need extra filtration cartridges in your filtration system because that's the hardest pollutant to get out of water is fluoride.

And so he's very he's a very straight shooter. This guy Dr. Polanski. So yeah, I I think he has a good system uh and it's cost comparative, as far as I can tell. Charcoal for people who cannot spend hundreds of dollars on on filtration systems. There are charcoal filtration systems like Britta. But Britta will not get performance out of water. Charcoal

filtration won't work.

You need reverse osmosis to get fluoride and many other contaminants out of water. Like many pesticides, you need reverse osmosis. – That spend a little bit of time talking about how to get certain toxicants out of people's bodies because I'm sure there was this now.

Okay now I have this load is causing immune dis regulation. It puts me at bigger risk for long covid because these are immune intoxicants. What do I do next?

– So that, Well there's two parts part A is don't put any more in and that's called we call it avoidance. Right? So we want to avoid cosmetics that have um there are per florets in cosmetics as well. Any waterproof, anything waterproof mascara.

That's because it's got a nonstick non stain chemical in there called upper floor in it. You can educate yourself very easily about avoiding these things by going to the environmental working group. It's a wonderful nonprofit organization that has hundreds of resources and really good databases that will help you.

They even have a database to help you pick a water filter. So avoiding, you know um not eating or drinking out of plastic, not microwaving in plastic, not putting hot beverages in plastic, not drinking through, not drinking your hot coffee through a plastic lid.

You know, the simple thing as well as avoiding bisphenol A. By not eating canned food that's the biggest contributor to B. P. A. Exposure in our diet.

Or excuse me in our environment is our diet and specifically canned food even though this finally sneaks in there in other ways. So that the avoidance part is number one and part of that is actually filtering water and filtering air. And I know that sounds extreme but there is so much published research and I have so many case histories of sick patients who got better by filtering their air that that they did and they got better by doing that amazing studies looking at putting air filtration systems in elementary schools and seeing the asthmatic kids get better. Just so air filters water filters absolute necessity if you live in an urban environment and probably a necessity if you live in a rural environment as well. So now the harder part is what do I do about my body burden, the body burden that I've accumulated over my lifetime, maybe the body burden that I was exposed to in utero, you know, but the body burden that I have now, so the the more challenging part of the metals, because metals are sequestered in the tissues and some in the fat mostly in the tissues and they don't leave by themselves. Unless there are some metals that actually will leave the body with sauna therapy. So sauna therapy is literally sweating and we have pretty good evidence that cadmium, which is a very toxic metal.

And maybe some mercury in patients who have high mercury levels will come out in the sweat. Unfortunately lead does not come out in the sweat so we can't use our, we can't use sauna therapy for lead declaration.

But sauna is also extremely helpful for many other toxicants and by many I mean an entire plethora of pesticides and herbicides and solvents and many things they were exposed to through air pollution. So it is a lifestyle um habit.

I want to say a good one that cannot really be done too much as long as you rehydrate. You know it can be done daily. I have a lot of friends, patients, doctors, colleagues who sauna every single day and are better off for it. It's a great way to improve the function of the skin which is a major organ of detoxification just by having it do what it's supposed to do. So I think sauna is very important.

There are lots of inputs that we can use their, you know of course for us we actually prescribe medications to treat metal toxicity. Those are drugs, prescription drugs like D. M. S. A., D. M. P., S. E. D. T. A. That are actually pharmaceutically binding to the metals to get them out of the body.

– So you want to speak to any doctors who are interested in doing this if you're not trained, you want to get trained, please don't just prescribe these because or don't if you're a patient listening, don't just ask your doctor to prescribe

this unless they unless they've got training, it's really, really important because if these medications are used the wrong way it can be, you can have some unhealthy results.

Dr. Patrick here does train doctors on how to do this. – Yeah.

Detox strategies, chelation, and aluminum exposure

There are many physician member organizations that do calculation training. Dr. Paul Anderson, Dr. Virginia Osborne to excellent training highly encourage my student doctors to seek training with them.

– Yeah. – As well. So that those interventions might seem severe. But for some people who have body burdens, they're absolutely necessary and they really can reverse certain conditions. You know, there's a NIH funded multimillion dollar trial right now called the tact to trial that is looking at preventing cardiovascular events are strokes and heart attacks in diabetics who've already had a heart attack. What are they doing to prevent any further incidents? They're using E. D. T. A.

To see significantly increase these folks ability to urinate away cadmium and lead the two metals that we know are toxic to the vascular system and significantly involved in the genesis of and the risk for cardiovascular disease. So that hard science is going to be published soon. – That's fantastic.

Now there is a metal that I'm seeing higher and higher on the labs month after month, after month, over the past two years and that's aluminum. I'm wondering if you if you can talk to us about why that is, where is that aluminum coming from now? – That I'm not sure.

I know that aluminum is used as an adjuvant in vaccines. It has been used in pediatric vaccines now for a decade or more a couple of decades. It is available in the food supply. Dr. Christopher Exley, who is probably the world's global expert in aluminum, talks about the um availability of aluminum in the food supply and that's mostly in the processing of foods, Right? So I I used to do this because aluminum doesn't really come out of aluminum foil permanently.

But I've been educated by him and I now understand that in the processing of processed foods, alumina silicates are used in a lot of processed foods and that the aluminum is available, meaning it does get absorbed into the body and that aluminum sadly goes right into the central nervous system, goes into the brain and is housed in the brain.

And Dr. Exley has published studies with autopsy specimens of both Alzheimer's and Parkinson's patients showing very high levels of aluminum in the brain biopsy specimens of those um those particular conditions.

So, I think there are probably other sources of aluminum, but the aluminum silicates from food processing and certainly the injected adjuvant aluminum is a potential source of aluminum exposure.

There's also aluminum and air pollution. You know, aluminum is a byproduct of manufacturing and so it is very commonly seen in air pollution as well. And you know, then we get back to air filtration. – Right back to the fires.

It could be it could be made airborne fires, right? – And it could stick to PM 2.5 molecules. Absolutely. You know, I haven't seen any data on that, but it's just probably because the study hasn't been done Aluminum and and PM 2.5 We know that PM 2.5 has mercury specifically stuck to it as well as lead arsenic and cadmium because the researchers have actually looked for those metals.

I don't think they looked for aluminum or I may not have seen the study. So I'm just not familiar with that research. But yeah, I think that there is aluminum in our environment and we absolutely don't want it in our bodies. It has no there's no beneficial, no biologic role for aluminum in the human body and a lot of toxic effects.

– Is there anything else that you want to tell our audience? – Well, I think that there, you know, I am very commonly called Debbie Downer laughingly, you know, by my friends because a lot of this information is not um it's hard to process, right? It's hard to process that we live in a polluted world. We're constantly being exposed to toxins and

most people think there's nothing we can do about it.

But that's absolutely not the truth, avoidance is a big part of it. The choices that we make in our everyday lives, especially around our personal care products, not just cosmetics, but our shampoos are um are lotions, all of that stuff. We can easily avoid.

A lot of not just the bisphenol a but also that also the phthalates, which are also immuno toxicants. And I don't want to talk about them. But I think it is really important to be careful with the products that we purchase that we put on our skin. And then there are many of us like Dr. Parpia and myself that have been trained in and know how to recognize, identify and assist our patients in the elimination of these toxicants.

And I think we are living in a time when that is urgent and necessary, especially now that we're all exposed to SARS Cov2. It's not that much of a problem, but it's not, I'll tell you, it's not gone. It hasn't disappeared.

And especially for folks who are battling long covid, you know, that it's crucial to decrease body burden of toxicants because of the necessity for regaining happy cell death and birth and getting rid of the cellular detritus.

That I just talked about going all of those components of long covid, you know, toxicants are important and play a role in every single one of them. – Honestly. It's a it's a relief every time I talk to you because it's what I see in my patients every day.

It's like, actually, it's relief because there's an answer right to, to a lot of the mysteries. This is the answer to what's behind or underneath the mystery illnesses that can't be figured out.

– Well, I'll tell you real quickly, maybe we can end on this. I have a colleague who's a naturopathic physician who eats impeccably, has a wonderful lifestyle. Came down with SARS Cov two and almost died. We almost lost him.

And now he has long covid. And it was this huge mystery, like why would such a healthy person get so sick? So, I asked him, where were you born and where did you grow up?

And I looked on the map, you can see at Ronald working group for the performance levels in the town he grew up in and he grew up in a town with some of the highest performance levels in the United States of America.

And so now we know, because he's tested at his body burden of per Florence is high and he had no way to protect himself from covid because some of those performance actually reside in the lungs. And there's been research published on this that people who have high performance levels have a much higher risk of ending up in the Icu with severe covid and have a higher risk of dying from severe covid if they have higher levels of a particular for fluoride. You know, the fast chemical I was talking about. That's why I brought it up if he says because this is personal to me now that a very dear friend and colleague who's almost died.

And I see the connection and we know because of the research researchers from Denmark, but it's still really excellent research. So we really have to pay attention to this.

– What is the best way to remove it from the body? – Well, the only methodology that we know so far is one that was shown to us by Dr. Stephen Jenness.

A wonderful environmental medicine physician who had a family that was poisoned by performance because the carpet cleaner came in clean their carpet and then put a stain free coating of performance on their carpet, which is common for carpet cleaners to do this. Right?

So we had the mother and the father donate blood as per the this is in Canada. So as per the health Canada recommendations, which is no more than once every six months. And he was able to monitor and follow them and see that their performance levels came down to normal.

You know, for Canadians at least within a two year period. – So bloodletting? – Yes, because the majority of the

performance are residual in the blood.

– Uh huh. – They don't necessarily leave the blood and go into the tissue as far as we know. And I must say, we know very little. So that's not the truth.

Some of them do reside in the lung tissue. They are stored in the lung tissue. But this was you know and this was new learning for me. You know. I did not know this two years ago.

I feel like we're all getting a lot of eye opening experiences through covid right? And learning a lot. And and there's some evidence just so you know this is the colestyramine may lower performance levels.

But just we don't have enough information. We don't have enough research to – Know if positive choline glutathiomide. – We don't know. There's been no research in this area.

Yeah. I wish I knew more. I wish I had several million dollars to find out with that money. – I mean where we are now is so much more, so much further ahead than where we were 5, 10 years ago, correct? Nobody was thinking about that.

Well, very few of us were thinking about this 10 years ago. But now there are more and more people think about. There's more research. – There is a lot more research and I think what we will find is there is a way to eliminate performance from the body.

We just have to figure it out. – Yeah. Yeah. Well, thank you so much. It's as always so informative. So so rich with information. Thank you. – You're so welcome.

Dr. Parpia. I'm happy to help you spread the word really. – Thank you so so much.