Parkinson's: Reducing Chemical Exposures Transcript

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Introduction and Background

Welcome back to the Parkinson's Solutions Summit. I am your co-host, Dr. Sandra Scheinbaum And today, I am so pleased to introduce you to Dr. Aly Cohen.

I'm going to turn it over to you, Dr. Aly, to share with our audience about your background. Okay, great. Well, thank you. First of all. Thank you for having me.

And thank you listeners for taking the time to listen to this conversation, which I hope will be an enlightening and also empowering. Believe it or not, I am an integrated rheumatologist, so I'm trained in rheumatology as well as integrative medicine, and I trained for the Andrew Weil Center for Integrative Medicine and became board certified.

But I'm also an environmental health specialist and some people know my history and how I got involved with this through my dog getting sick. And so there's a long story behind this.

But essentially, I didn't ask for this position. I just kind of was thrown in. And it's been really kind of an incredible journey, understanding how chemicals, specifically chemicals, environmental, you know, radiation, sleep, stress, you know, all of these factors contribute to what's called environmental health.

So I thought I could really jump in and talk about some of the things I've written about and researched in regard to Parkinson's disease, which is your topic.

Let's dig in. Let's start by talking about synthetic chemicals. What is the state of synthetic chemicals, particularly in the United States? Yeah, this is this is a really sad state of affairs, which really took me by surprise about 15 years ago, 10 to 15 years ago.

And it just continues to make me kind of upset as I yesterday was walking to the mall and saw an entire store dedicated to painting little girls nails.

And just the smell was wafting through the mall. And, you know, listen, I do my share of environmental exposures, you know, intentionally like hair coloring and that kind of thing.

But I think it's really important for people to understand what the problems are, what the numbers are, and then they can make their own decisions based on good information.

So there are currently somewhere between 90,090 5000 environmental chemicals, which are manmade human made synthetic chemicals that are now infused into everything we unfortunately love, from food packaging to chemicals on fabrics that make them stain guarded and stain proof to food wrappers to make them grease proof to bisphenol A and BPA, which many have heard of, and all of the different substitutions for BPA that are in canned foods still today.

Synthetic Chemicals in Daily Life

All canned foods as part of things that aren't made plastic, including, you know, even our computers and our televisions, our phone cases. So we are kind of infused with chemicals, not just in the stuff that we carry around and use, but also what we ingest from over 10,000 food additive chemicals that have been added in, as well as water contaminants, which I hope we'll have time to get into specifically in regard to Parkinson's.

So we have kind of infused ourselves with all these chemicals and more so out of convenience. In the 1950s after World War 2, we had a huge increase in the development of many chemicals for pesticide aids and for agriculture to protect our troops overseas against malaria and some of these pesticides.

And, you know, tick borne illnesses. So again, there was this big rush to market, and we have no oversight from the United States. Our government doesn't require the vast majority of these chemicals to be tested for any amount of safety or toxicity in our products, which is just jaw dropping.

So I'll repeat it. Our cosmetics are cleaning products, all of our textile chemicals, even our food additives, to be honest, because they are not requiring testing before going in to our food, have no testing required by manufacturers for safety, toxicity and specifically even in certain demographics, like children, pregnant women, the elderly and those who are immunocompromised.

So, you know, we're really in a in a situation where our 4.5 million years of evolution, where we relied on really natural sources for water, for air quality, for food, has really changed so dramatically, just primarily over the last 100 years.

And I will make the argument that that's why we're getting sicker and getting sicker younger with a lot of conditions and diseases, including rheumatologic diseases that we never used to see before, not just in humans, but in humans that are younger with no family history even. Wow.

So it sounds like these regulatory failures have really played a role in the safety issues with these chemicals. And also the pervasiveness of would be fair to say.

Yeah, absolutely. I mean, you know, really the lot of these chemicals, they don't kind of, so to speak, smack you in the face. They don't always give you a rash. They they're insidious.

You know, they make their way low levels over time into our body through skin, through air quality and breathing in, and also ingestion, of course, through water or any liquids as well as food.

So, you know, they're insidious. And so most people don't think of them as harmful because they don't affect us acutely in most cases. And the argument really is, is that small amounts, even parts per million parts per billion parts per trillion have been now shown through international research and robust literature on this to really have health effects and maybe not acutely, such as food allergies, which we know obviously are on the rise.

You can't bring cupcakes in with our kids to school, but we're talking about long term chronic health issues, which are metabolic as well as immune system related.

So what are some of these large classes of chemicals that are in our daily lives that we're talking about? Can you describe those? Sure. You know, the the list for what they do is so, you know, long in terms of whether they're designed for a function to decrease something or as a solvent or as paint or as pesticides or whatever they're designed for.

Then there are breakdowns of chemicals for what they hurt, whether they're neuro toxic or liver toxic. And so the way you chop up these chemicals and divide them out is really based on what you're trying to frame the story you're trying to tell.

I think for the most part, you know, I can limit that discussion to things that really affect us, a lot of us on a daily basis that we can relate to. So, for instance, Bisphenol-A or BPA, which is something that many people have heard was removed from plastic baby bottles actually by my coauthor for for two books, Dr.

Fred Bansal and his colleagues over 20 years ago. The research began on that and bisphenol A is an endocrine disruptor. It was first discovered to modulate estrogen at low levels, also modulate androgens, which are male hormones like testosterone, among others.

And so these chemicals we now know like bisphenol A, B and the regrettable, you know, substitution, once they take BPA out, they often will put in something similar because that's not banned, such as BPS and BPSIP and BPFP, and the list goes on.

But those tend to have the same properties as BPA. And so it's kind of a continuous Whac-A-Mole. But BPA is one of the most, you know, largely the, you know, largest production compound around the world because it has so many uses.

It's been used, as I mentioned, not only in the past, but currently in almost every canned food or drink that we pick up. So that includes our organic foods often.

I mean, there's only very few maybe.01 percent of all cans are made without BPA, but again, could have substitutions. But in general, you know, BPA tends to make plastics hard.

And what I use an example from the bare, the time of bare aspirin, when we had clear bottles with aspirin, that was one of the first inventions when they realized that BPA could be interlocked and create a hard plastic, that's clear.

Chemical Classes and Health Effects

And so that took off because now we could save on a lot of, you know, natural resources such as wood or stainless steel or any metals. These were to save our resources is to use plastic, you know, things that were unbreakable.

Then there's another class that is called phthalates, which are plasticizers and chemicals as well. And there's hundreds, if not thousands of those. And those are often used to make plastics bendable and flexible.

So think cords on your computer, possibly your phone case if it's bendable. Depending. Again, I don't want anyone to flip out here, but the idea is that it makes plastic.

I'll give you some other examples. Hairspray have a lot of phthalates in order to make it not brittle. Nail polish has phthalates added often so a lot of things that need to be flexible but not break vinyl is a phthalate component.

So, you know, vinyl, shower curtains, vinyl flooring, anything with vinyl is often made with phthalates. So we have different classes of chemicals in cosmetics like parabens, which are often used in food as preservatives, not just in cosmetics to keep cosmetics lasting longer.

But phthalates also have to do with fragrance and keeping fragrances lasting longer on the shelf on our bodies. So again, I'm not here to gloom and doom.

I want to actually spend a lot of time if we can talk about what to do about the problem. But I want to just make sure people get the point that it's just a very pervasive problem.

Yeah. And would it be accurate to say that they are creating both acute and chronic health issues? Yeah, I think that's what the literature has really shown, especially when they look at specific phthalates like DHP and certain flame retardants that we've infused into couches over the years, which is only voluntarily removed now when they've looked at BPA specifically.

So when they're using, you know, sort of a one representative of a class, it's easy to say that they the rest of the class probably have similar properties, and that's what's panned out.

But we have robust literature on the way. Many of these chemicals, thousands of chemicals work in the human body and in animal studies, in epidemiologic studies and occupational studies as well.

And so, you know, the literature is pretty, you know, powerful when it comes to explaining this and showing that the evidence exists so that we can move on to what to do.

Yeah. Specifically, can you discuss the association with these chemicals and the development of Parkinson's? So we have, you know, now had enough literature and certainly much of a problem because we know that Parkinson's has been on the rise.

So because there's a need to figure this out so desperately because of certain diseases that have increased. And we know that, you know, people are having women are having their periods, younger, young girls.

That's a component of environmental chemical exposure, especially the estrogenic component. And we know that autoimmune diseases, as I can discuss, really have been on the rise as well over the last two or three decades.

But Parkinson's also, unfortunately, which is considered an autoimmune disease, it's a neurodegenerative autoimmune disease similar to, say, maybe in multiple sclerosis, but by no means is it is it left, you know, away from this immune system process.

And what we you know, what we now know is it's essentially it's on the rise over the last ten years. It's risen 35% in terms of its incidence. So we have a real problem.

It's expected to really actually, you know, increase in the next 25 years. It's expected to double in the next 25 years unless we start to take control over what we do in our home, in our households and, you know, with our kids and our and our parents.

It's been a six fold increase, you know, in patients who or I should say, in people that were occupationally exposed. So we know we have the data from especially occupationally in particular as it as it pertains to those who work with pesticides.

I don't want to limit this only to a conversation of pesticides, but I will say that the data is pretty strong, that farm workers and those who occupationally work in the fields and handle these type of chemicals and again, pesticides.

There's thousands that have been approved for market use in the U. S. and around the world, and they've actually been well established to be associated with the development with Parkinson's disease.

Now, mind you, there's also been great literature on the idea that we have genetic predisposition, like with everything else in life, there's this dance between our genetics and what we've been given through birth, the exposures that we have throughout our lifetime, and then of course our lifestyle and how we manage our lifestyle, whether we exercise a lot, sweat a lot, eat clean food a lot, eat foods without pesticides in them, drink water that's been filtered.

Chemicals and Parkinson's Disease

So it's that combination of genetics, environment and lifestyle that truly helps to establish risk for developing any disease. But in the case of Parkinson's, we know that it's it's primarily environmentally induced because even one of the biggest studies that looked at 70,000 twins found that only about 3% developed Parkinson's from that familial or genetic component alone.

And so we do know that it's primarily environmental, which leads to this question what are we exposed to? How are we exposed? And better yet, how can we work to get rid of these exposures?

And I'm going to, you know, help with that. But the idea is that, you know, there's this component of dopamine. There's a couple of theories, but certainly the genetics behind conversion of dopamine into its active form can get blocked from some of these chemical exposures that, you know, and I can name a bunch of pesticides, but I'm not trying to scare anyone.

And then there's this question of metabolic issues. Are the mitochondria that are the cellular structures that create ATP and energy within our body, but in our brains getting affected by these pesticides and some other chemicals which we'll go into and cannot affecting, you know, creating what's called oxygenated or I say, you know, oxidative stress where the mitochondria aren't working to their best ability and creating and having the right physiology.

So, you know, the idea, the theories vary, but we know that there's damage either at the cellular level, at the transport or receptor level. There's other chemicals, there's chemicals like I'm sure some of your guests have heard

of Camp Lejeune and some of these water contaminants that particularly TCE trichloroethylene, which is a solvent.

And so, again, industrial chemicals that we created that are getting into our bodies through water, through exposure to work, you know, from chemicals, exposure through work.

But, you know, they're kind of insidiously getting into our body. So there's some good ideas as to how to keep that, you know, reasonable in terms of how to block those inputs.

But generally speaking, that's how many of these chemicals are working from an environmental exposures. Wow. Pretty scary picture, but we can do something about it.

So let's turn there. What can we do to reduce our exposure to these toxic chemicals in our lives? Yeah. And so I'm here to tell you that it can be done.

We know that many behaviors that we embrace or even in the past or moving forward can help to eliminate a lot of chemical exposures that cause harm for any disease, any any risk that may potentially happen.

And so one of the ways I look at things and, you know, I share this with my patients as well as other, you know, people to my platform, the smart human is I try to teach people that, first of all, you want to remove as much as you can the exposure once you can identify it.

And I think you just have to learn about where these exposures come from so that then you know, and when you know you do better. And so you start to, you know, for instance, I'll stop some of these, you know, landscaping people and I'll say, please put on a mask, put on gloves, you know, not switch your job.

You may need that job, you know, but really, how do you protect yourself better, even if your boss doesn't necessarily go to any lengths to help protect you, you know, change your clothes before you go into your home, especially, you know, if you have children, you know, you don't want to track shoes into the house.

Once you've been out working in a field or working with chemicals or gardening. I mean, so people were using Roundup and still use Roundup. Well, now it's been taken off the market because glyphosate is such a toxic chemical.

So we want to really think about what are the exposures that we unknowingly put ourselves into and surround ourselves with and how can we just either swap out or remove those chemicals or at least protect our home environment from bringing in tracking those chemicals in have a bucket outside ID for shoes and, you know, have a separate washer dryer that you know, that you can use perhaps if you're, you know, gardening or that's your occupation is agriculture.

So that's one really good way to do this. You know, those types of chemicals, there is different types of gardening, which certainly do not involve chemicals, and this has become very popular.

Rutgers University has a whole gardening center which people can get involved with. So there's there's just a lot of opportunities to to really explore doing gardening and environmental work without chemicals that are pesticides specifically when it comes to drinking water, which happens to be one of my favorite topics, we really need to think about how our water is contaminated because, number one, it is which a lot of people don't realize are municipal tap water, which feeds 80% of our country.

The U. S. 20% is wells that are local to that home or to that town which have their own issues. Personally, you know, you know, from from just, you know, chemicals coming from miles away.

But we also have municipal tap that comes from, you know, areas where the water is cleaned and the treatment plants both have their issues. And so what I really recommend people doing is filtering your drinking water, whether it comes from a well or whether it comes from municipal tap, because that you can control within your home when it comes into your home, that is where you can filter it, whether it's a carbon block filter like a pitcher or a faucet head

or a refrigerator door filter all the way through to.

What I would more recommend actually is the reverse osmosis, but vetted reverse osmosis because so many of them tout, you know, doing so well for your water system, but they actually remove far less chemicals than I would recommend.

So vetting those is very important. And I post a lot of this information on on my platform. The smart human. But I want people to understand that there are options.

And so water is a great way to start reducing those exposures because even TCE and some of these chemicals from Camp Lejeune, which are considered safe in the water at five parts per billion by the U. S.

Reducing Exposure at Home and Work

EPA, many would argue that's far above where it should be, especially if you're drinking large amounts of water. So you can see how the volume could could make a difference.

So water, food, trying to go with cleaner food, meaning USDA organic, which actually removes or doesn't allow for genetically modified ingredients. Most harmful pesticides and fertilizer chemicals.

The soil has to be clean when growing those plants. So clean water, clean food, removing in inciting agents from your life as much as you can, and then moving into detoxing, which would be, you know, harnessing our anthropological, you know, benefits of sweating, of moving our bodies to make those mitochondria work harder.

And to to keep our bodies moving, sweating makes our liver see more blood flow, which helps to break down a lot of our chemical exposures. So going back into our history of evolution, we've really had some beautiful developments in the human body to help us work to remove chemicals, even though they've never seen our bodies, have never seen these chemicals for most of our existence, we can still harness those attributes for our benefit.

I want to point out that if this may seem overwhelming and you're wondering where do I start? Health coaches can help to help you find good sources of information, as well as help you to say, well, we're going to start at one point, we can start small.

Doesn't have to be overnight, and then gradually you might remove more and more products or you might do more and more things to support your detox pathways.

Yeah, absolutely. I mean, you know, I'm telling your audience a lot of information, this is ten years in the making, but I want to share with your audience that this was a really big journey for me and I had no idea what I was doing.

And I was really trying to figure this out, trying to believe whether the facts that I was learning was even true, let alone how to actually start working on these issues.

And so, you know, again, I've written books about how to remove these chemicals. I'm not trying to promote my book on this this session, but I want people to know there are great resources that are simple, not over the top.

And I think people could really do one change a month and then maybe one change every other week and one change, you know. So I think it's a journey and I think people should take their time to do what fits well into their lives, what you know, what they can conquer little by little with not not feeling overwhelmed because that is the goal is not to overwhelm people, is to help people change in a way that makes them comfortable, that will stick instead of being like a diet or something that's short lived.

Absolutely. He commented on things like air fresheners, those plug ins, which maybe people are thinking, This is good, I'm going to have my house smelling fresh where it's just the opposite.

Yes, yes. I read a lot about this the day I had my my moment, the light bulb went off when I was studying all of this information years ago. And I had an entire drawer in my kitchen with everything from Seabreeze to pumpkin spice and holiday peppermint and I mean, you name it.

I had that that scent because it was exciting to feel that I was just kind of changing with the seasons and, you know, people like rooms to smell nice, but guess what?

A lot of those chemicals, which by the way, we inhale and get right into our bloodstream, just like oxygen. And I really learned a lot about the chemicals that we inhale.

And how, you know, not once or twice or once a year to, you know, like nothing crazy. But if you're really inhaling a lot of this stuff on a regular basis, it can be measured in your blood, it can be measured in your urine, it can be measured in breastmilk.

So it's really important to understand that the studies have already looked at this stuff. And we know that we're we're kind of filled with these chemicals.

But good news is I took the whole drawer through a good way. And I regularly test my body and I regularly have patients, you know, explore these changes.

And if they want to get tested to see the benefits of their changes, that's great. But not everyone has to do that. In fact, I encourage people to take their money and spend it on actually cool things like reverse osmosis or more frozen organic food, which is great and full of nutrition as has even more so than fresh, even, you know, or buy an air filter if you feel like you need that in the environment you live.

So instead of testing as much, I really just kind of focus on using people's resources well, and I think that's been very helpful. But but yeah, there's plenty we can do.

And so, you know, I encourage people to share with others and get great resources and trust people that they feel are legitimate. And even regarding personal care products, cosmetic skin, hair products, there's some wonderful all natural organic products out there.

So there's there are resources available. Absolutely. Even Environmental Working Group has a wonderful resource called Skin Deep Database, where I looked at my cosmetics and personal care and skin tanners, my son went to summer camp and I said, Well, that's fine, you can pick it out.

14 So he wanted to, you know, hang out with the ladies. And so I said, Listen, if you buy anything a two or a one, you can get it. And sure enough, he picked up the app and did it.

Nutrition, Resources, and Closing Remarks

So if my 14 year old can do it and my high school students I teach do it, I think it's really something where it actually will end up saving time because you pick your, you know, 5 to 10 products that you enjoy, that you know, that are safe, that are vetted through toxicologists, and then it makes life a lot easier, really.

So just take the time to get into it. And once you get into it and you get it over with, I tell you, there's a really good feeling about, you know, kind of moving through life, you know, with your with control over what ends up in your body.

I think. Oh, absolutely. So let's turn to nutrition. What can we do nutritionally to help offset some of the pathways for developing Parkinson's and perhaps better manage Parkinson's?

Yeah. So this was something we wrote a quite a bit about Dr. Vom Saal and I in our textbook, in our in our guidebook, we were talking really about the big picture of nutrition.

Actually, there's so much literature on not just removing these chemicals, as I mentioned, but bolstering our nutritional levels, which are actually protective against some of the changes that can occur at the gene level from environmental exposures.

So, you know, we need, you know, elevated levels of D and vitamin C and iron, and those were shown to be protective, especially against lead in children that were tested.

We know that having adequate amounts of omegas were really important for Parkinson's disease and for brain health. So we know that nutritionally is it's it's quite important to support the tissues to do their functions that they were born to do to offset the damage that come in from synthetic chemicals that we had no intention of being exposed to.

So it's that combination of removing the bad and then, you know, kind of giving the body, you know, what I call the fertilizer to help it thrive. And so to me, that has made all the difference in terms of how people function with Parkinson's disease, but also for those who have family members that are concerned.

Again, I said it was very limited information on familial but more exposure type of worries. But again, some people live in the same home and they want to make sure that they're doing everything they can to prevent the risk of Parkinson's disease developing.

And I think that's a legitimate concern. And so the idea is let's get ourselves healthy so we can better combat our environment that we may or may not be able to control as well.

So, Dr. Aly, as we draw to a close, where can people find you? Because I know they're going to want more information. I hope so. I hope it didn't scare anyone off.

But I do really do meter out. You know, the positives, the empowering information, so much so I would love love people to follow. You know what I share on Facebook, Twitter, Instagram, TikTok.

It's called The Smart Human. I mentioned it a few times, but The Smart human, thesmarthuman.com, The Smart Human podcast, YouTube Channel, but certainly Tik Tok, Facebook, Twitter X, and I'm really happy for people to follow their Facebook is great.

Especially I work really hard on that one. Instagram is more fun, so it's really got a little bit of a different flavor for each platform. I'm in Princeton, New Jersey.

If people need to reach me, want to reach me, want me to see, you know, patients either themselves or their family members, I'm more than happy to see them for not just Parkinson's, but other considerations, ailments, autoimmune issues, health, wellness.

So really, that's it. It's really the platform, The Smart Human. I do have a book called Nontoxic Guide to Living Healthy in a Chemical World. So that's on Amazon.

But it's really a guidebook. No endorsements, no brands. It's really clean. And so people will be able to understand that what's written there is written without any backhand deals or any kind of, you know, endorsements.

That's excuse me, important to me. So please check that out as a guidebook to help people walk through this difficult topic. That would be a great resource.

And I want to thank you. This has been enlightening, informative and very, very practical. So thank you for being a guest on the Parkinson's Solutions Summit. Bye now.

Thank you.