Introduction and Aly Cohenu2019s Background

Welcome to this episode of the PCOS SOS summit. I'm your host, Dr. Felice Gersh. With me for this very important episode is an amazing physician. Aly Cohen.

Aly and I have spoken on the same stages, and we think so alike. Her specialty is dealing with all the effects of the environment on the health of people.

In this case, we're going to talk about women with PCOS in particular. She's amazing. She's board certified triple She's a triple board certified doctor in rheumatology, internal medicine and environmental medicine.

So welcome. Aly Thank you so much for joining me. And before we begin, please introduce yourself in terms of like how did you get on this path which very few physicians have really ventured down?

Well, first of all, thank you so much for having me, because you and I are kindred spirits. We have always been since the minute we met, I think in South Africa, when we were lecturing together.

That was such an incredible time. But, you know, so thank you for having me and also for your audience for listening and taking the time, because what I'm hoping to discuss will be very practical and very simple and cost effective and not anything outrageous. So.

So the reason I now do environmental health along with my rheumatology training and internal medicine training and integrative medicine training. So I've kind of combined all of it because it all matters.

It's all the same stuff, but from different angles really developed out of just my desire for people to stay healthy, prevent disease. And I think that was always missing, as you'll agree in medical school, in medical training, we treat diseases and symptoms and we kind of, you know, understand drugs.

And that's how we're really taught. And there was always some part of me that wanted more than that. How I got into environmental medicine was an interesting turn.

I was well trained in all my fields rheumatology, integrative medicine and internal, and I was seeing patients, mostly rheumatology patients. And my I was a young mom with two young kids and I had a golden retriever and my dog got sick and he got so sick with autoimmune hepatitis at age four that it was just bizarre and unusual and not even normal for this disease, let alone for this breed.

And so having done a deep dove and just completely heartbroken, I was learning really well what happened to him. Was it his drinking water that was contaminated?

Was his dog food contaminated? How about that flea and tick junk I put on the back of his neck and would not even sometimes bother to wash off my hands if it got on there.

I thought about the toys that he was sucking on that were plastics and so really being so heartbroken and trying to figure out what developed made him develop this autoimmune disease.

I had a deep dove into what are our products, what is our water like? Why do we where do we get it from? How is it clean? What is our food system like and why do we have these chemicals that are unregulated?

What about like cosmetics, feminine care products, personal care products, cleaning products? Are they protecting us, the government, from these diseases that could come from those chemicals?

And really it just took on a life of its own and so now having written a textbook with my partner for Oxford and now doing a consumer book on guiding people on the right decision, and also this platform called The Smart Human, that I started out of frustration literally with people not telling me this information, the smart human is a way for me to tell communities, kids, teachers, you know, everybody on all social media platforms and podcast What I've Learned and How to Do Better.

Well, it's amazing. And I can only recommend to the hilt the books that that Aly has written, both for consumers and for physicians alike. You know, it's really you're a very prolific, bestselling author, and your platform is amazing.

Now, women with PCOS in general have like a host of metabolic problems.

How Environmental Medicine Became Her Focus

Do you think that many of them actually stem to these chemicals that they're exposed to? And maybe they're more sensitive or what do you think is going on in terms of the environmental chemicals and women with PCOS?

So I want to just briefly say how we got into this problem of environmental chemicals, because it'll also play into how epidemiologically, as you know, in your practice, we're seeing larger and larger numbers of people with these metabolic illnesses, such as obesity, heart disease, diabetes, insulin resistance and of course, autoimmune disease, which is what I manage quite often.

You know, we have had pretty much for millions of years, 4.5 more, so more or less millions of years we've been on this planet as human beings. And it wasn't really until the last, say, 150 years of human existence in modern industrialized environments.

This modern day life we are in that we've had over 95,000 chemicals basically infused into our life. So up until, you know, 4.5 million years and then up only 150 years ago, we've had this onslaught of pesticides that were created, chemicals that are used for farming that at first seem like a great idea.

But no one followed out the science, fertilizers, cleaning products that we're told we need in our lives all day, every day, chemicals in our cosmetics and personal care products.

We all kind of assume, like I did, that they were all safe before going on to the shelf, you know, feminine care products that we put in internally, as you as a gynecologist, you know that the environment within a vaginal canal is incredibly absorbent.

And I mean, that's why we use estradiol and some of these other medications into vaginally because we know it gets absorbed. Well, the same could be said for a lot of the chemicals that are in tampons, feminine care products.

Certainly Johnson and Johnson have the baby powder issue and ovarian cancer risk. So we do know that that area is not considered. You know, people don't think about that area, especially with young women and a lifetime of feminine care products.

So I guess back to the question, do we do I really believe that chemicals are a big part of why there's such a metabolic issue in our environment with women, in particular PCOS as well?

Absolutely. I believe environment plays a huge role, a huge role in why we are all sick men, women and kids. And I say that because the numbers support this.

And what we now know about many of these chemicals which were discovered, we understand the science, particularly people who study endocrine disrupting chemicals or hormone effects from these chemicals in you know, in the lab, at the cellular level with animal studies and then moving into humans in epidemiologic studies with humans, we now know that these chemicals do, in fact, have the ability to modulate, disrupt it, which is why they're called endocrine disrupting chemicals.

The normal workings of hormones, particularly in the human body, whether it's how much are made, how much are received at the receptors, whether it's the feedback loops that are so critical with hormones.

And then, of course, into immune system disorders, which we now know the effect in metabolic diseases because hormones are the messenger for literally thousands of physiologic activities, whether it's the immune system, endocrine system, neurologic system and metabolic system, you know, how do we manage glucose?

How do we absorb that into the cells and utilize it efficiently? How do lipids and fats increase in size and number just by exposure to certain chemicals?

We now know pretty well do that, such as BPA and a lot of other chemicals. So so, yes, the answer is, I believe the vast majority of of what we're managing now, especially at younger ages, which is unfortunate, and also people with no family history.

This is the basis of an upcoming book that I'm working on, is that my world of rheumatology is directly affected on the clinical level of what I see, and it is directly related to people's exposures to these chemicals over even a shorter period of lifetime than we would expect.

Well, our environment is overloaded with these chemicals, so let's do a deep dove into what some of these chemicals are and like what products they're in.

Let's let's start, for example, with personal care products. You know, maybe you could talk about like, well, what's in some of these personal care products and then what products maybe are safer to use.

Yeah. So, you know, I want to make, you know, full disclosure. I color my hair, full disclosure, I use makeup, I get my nails done, I get my toenails done.

You know, full disclosure, I'm a woman who believes in trying to look pretty as well, you know? So I want people to know that what I'm about to share is not saying you either do this or you're going to get sick.

It's really, you know, whether we develop illness is is a dance. It's a really interesting dance between our genetics and whether we're predisposed to some illnesses.

It's a dance between genetics, lifestyle. How do we eat well? Do we exercise and sweat out these toxins? Do we sauna? Do we sleep well? And then also these environmental exposures, most of which can, you know, manage and actually make a dent in in terms of exposure.

But many we cannot we don't have control over, you know, the highways when we're driving or air quality. We don't have a lot of, you know, ability to change the food system.

And, you know, at its roots, we we unless you grow your own food. So we are at the whim of an environment that we've created and convenience. But by the same token, we also have this incredible power to remove or reduce those chemicals in a very powerful way.

Why Chemicals May Affect PCOS and Metabolism

And the reason we know that is that there are pre and post studies of people who make very simple everyday changes to their everyday habits and can actually measurably see a difference in those chemicals when they're measured in either blood, urine, breast milk.

I mean, we have many of these studies and I talk about that in the book so that people understand that what they do is not fruitless. It has value. So in terms of cosmetics, you know, people don't realize there is no oversight, no required testing for safety or toxicity of any of the chemicals that go into our makeup, our personal care products, our cosmetics that goes for men and women.

So, you know, all these body washes that my kids are into, I have two teenage boys, cologne that they like, body sprays, feminine care products. You know, my my one son is middle school and he loves his hair products.

So, you know, we're always fighting over which which level of safety off of the environmental working Group's list, which I can share. You know, I say three are below or two or below, or else you're not getting that for summer camp.

So he learned how to do it. It's you know, if kids the middle school can take these resources and do them, you know, look up an app or look up a website that's free, then why not give them those opportunities to control what they put in on and around their bodies?

So the vast majority of these cosmetics, again, are really unregulated. No requirement. Now, they could have an organic ingredient in it and then say the word they are organic, but that's greenwashing for the body.

You know, that's not just environmental greenwashing. That's saying, you know, oh, you're healthy because we have one ingredient, we're going to call it organic.

That's not true. The only thing that can be called USDA organic is food, and that has requirements for that. But cosmetics cannot get away with that. They can say the word organic and they can do a lot, but they can't get away with actually being organic and saying they're organic unless they're 100% organic and they can prove that.

So, you know, it's just a really sad situation because so many companies make money off of esthetics and beauty in the industry, but don't really have any concern over the safety of absorbing those chemicals through our skin, through our vaginal canal, you know, through our hair and shampoo, conditioner and all that.

So what I like to have people think about, number one, is less is more, okay? You don't have to give up makeup. You don't have to give up looking pretty.

There are so many good companies that actually do it well and I guide people again. There's a lot to go through. I don't want people to think they have to be a toxicologist to go out and buy makeup.

There are people that do that for us. Environmental Working Group has a skin deep database clear, yeah is another app and there's several others that use a lot of the same data to to create these scales of safety from 1 to 10 ratings, so to speak.

But the idea is that, you know, number one, think less is more. Do we really need as many cosmetics on our body every day? When you mentioned how many women tend to use, it's true.

On average, women tend to use about 12 to 14 personal care products in a 24 hour period. Menus about six adult menus about six, which, you know, explains a lot.

And then there are teenage girls. And that's who I like to teach is is high school kids, teenage girls use on average 17 products per 24 hours. And so at such a young age, they're getting the most absorption of a lot of the chemicals that are often untested.

So that's really a good group to go after, but you don't have to use all of those. So one thing is to lower the amount you use overall if you need to, if you can.

Natural is beautiful. You know we now know that natural is pretty beautiful. Number two, using resources like Environmental Working Group to it, like my sons, where they look up on an app called Healthy Living or on the website itself called Environmental Working Group or EWG Gorg is actually the website you can actually do dropdowns of shampoos and conditioners, sunscreens, body tanners that I just used, you know, which had a great rating. And it'll tell you what chemicals are in there and why they gave it that rating.

And you get to make your own choice for your own self or your family. And so that's another great way to do it.

And, you know, really just being careful to get as much stuff off your body as much as you can when you don't need it.

So those are the top three issues. There are phthalates which keep fragrance, you know, smelling long, long term shelf life, so to speak. They've been linked to a variety of hormone disruption and parabens, and a lot of chemicals in cosmetics are used as preservatives.

There's even mercury, believe it or not, a lead mercury is actually considered antiseptic. So there's can be some amount of mercury just placed in even eyeshadows to keep its, you know, from giving you an infection, which is great, but there's alternatives to that.

And then there's lipstick studies that show that lead, especially the bright colors. You know, the way they get those bright colors is often because they have to dig deep into pigment.

You know, resources that have are often contaminated with colors like that contain cadmium, lead and mercury. So there is no regulation on how many times do you lick your lips over a lifetime, how much you ingest over a lifetime?

But we want to think about getting to the root of the cause by choosing wisely to begin with. I think looking at those apps sites, resources is really key.

But if someone doesn't have that available at that moment, are there any buzz words that they might look at on a label that might clue them into Maybe you should not buy this product?

Yeah, I mean, look, there's a lot of companies that are very forthright in promoting what they've removed because they understand that's the consumer group they want to go for.

So that's great. They're geared towards that consumer group, which is very likely to spend a lot of money to be cleaner with their beauty sulfates. Sulfates, you know, that can be a component.

Lauryl sulfate also s sodium lauryl sulfate. Sorry, sl s sodium lauryl sulfate. PARABEN free. BPA free. But that's typically used more in plastic containers.

You know, they don't typically talk about there's a couple other chemicals that I don't think they advertise as much, but they certainly hypoallergenic, you know, can be helpful.

There's just a variety of catch phrases. But again, because it's not monitored by anybody, they can market anything they want and have, you know, paraben free.

But a lot of other stuff that they didn't mention on the front label. So I get very nervous about anything bought on the go.

Safer Personal Care Products and Label Red Flags

However, when I go into one of these some of these big box stores, if you go to the bar code and sometimes they have a sticker that goes over the bar code, but if you can get to the original bar code of the product you can use.

Healthy Living is one of the apps where you can just run your phone over and it'll pick up the bar code and give you the data on that if it's in the database so you really don't have an excuse on the go, I'm going.

I do this a lot. I mean, I like to say that you don't. But, you know, the idea is that it really only takes a second to see if you can narrow things. And I do this with sunscreens recently as well.

It took me about 20 minutes to go through all of what I needed to know. Well, that's great. The bar code little clue there to get the information is fantastic and now so personal care products, huge area.

What about storage of food or cooking food? How about those issues? Do those actually also, you know, sort of promote problems in terms of environmental chemical exposures?

Well, the answer is wherever you get chemicals from, whether it's a little or a lot, where it's often or not so much, it all adds up. You know, our bodies are sponges, right?

I tell this to the teenagers and kids I teach, you know, we are just a body that absorbs brown skin from inhalation, from international exposure, you know, so you don't on and around your body.

So, yes, I guess the question is everyone varies in their lifestyle and their products and their exposures and their access to whatever you can do to protect yourself.

But the idea is that the more you cut away those aspects of intrusion into your body, the less likely you're going to be walking around with chemicals that are working against your normal physiology.

So when it comes to cooking, we want to think about the a variety of things from not only what you eat in terms of processed foods and ultra processed foods, which are a lot of, you know, you know, synthetic chemicals put into our food to give it a shelf life for years, to add color, to add crunch.

They don't all have to be natural. They want to keep those on the shelf for a long period of time. Financially, it makes sense for them for the manufacturing, but it doesn't mean it's helpful to the body.

And so I would say start by thinking about the quality of your food in terms of the chemicals and move towards whole foods that have come up from the earth.

You know, and hopefully I would hope people would think more not just conventional fruits and vegetables, which are much better than processed. I will say that.

But consider also moving towards USDA organic food, as I mentioned, that does have real teeth and oversight. So you want to think about USDA organic food whenever possible, when it's on in season and it's accessible and frozen organics have all of the nutrient value you can imagine because they're flesh frozen.

So I really push for frozen organic foods that you don't steam in the bag, but you move into a glass container that's microwave or oven safe so you don't get those heated plastics into your food when you're cooking and heating them.

So I would really argue about the food quality, trying hard to make that clean, using washes. If you can't find organic, you can always use baking soda and vinegar.

And I actually give a lot of that information in the book so that people can have any number of choices. The second thing I want people to really think is that food packaging does matter when it comes to getting into your food, which you then ingest.

And so you want to try. I mean, it's hard to control the food system. Everything's in plastic, but we can decide if we want to buy something in a jar.

We want to think about when we buy vegetables wrapped in in plastic, whether that was the original intention when it came out of the earth, you know. So we want to think about the food packaging.

Tried to avoid hot soups, hot food takeout in containers that are plastic or even lined with plastic. I'll give an anecdote. We love Indian food. We treat ourselves and have a really good time with that.

But the idea that it goes right into hot plastic all the time and really just makes it not taste as good to me, I guess, emotionally and possibly at a chemical level.

So we've worked it out with our local restaurant that we love that I bring one of these stainless steel camping pots that's the interior is all stainless steel, and they fill it with tikka masala for us and we just take it home from where it's cooked.

So the idea is we're just avoiding a little bit of exposure or something that's considered more of a habit and, you know, habits you want to kind of clean up because you do them so regularly when you drink coffee in the morning or t thinking about loose leaf tea instead of perhaps tea bags that can leach microplastics.

I'm thinking about glass and stainless steel instead of necessarily Styrofoam, which is considered a carcinogen that I used to drink from Dunkin every day until they got rid of Styrofoam.

I mean, that was years of doing that. So we all make mistakes, but we didn't know better. So there's little habits, little treat tricks in terms of pots and pans and cookware.

It is a good idea to go back to old school stainless steel and avoid, you know, nonstick pans, which of course make it easier but really do contribute quite a bit of poor flora alcohols and in a class of chemicals called p pfas chemicals that many of you have heard in a listening in the news because they are pretty toxic chemicals and they've been used on Teflon and Gore-Tex and anything rain proof greaseproof nonstick.

That was their purpose because they are so hard to break down in the environment and get into our water systems. But they also are very hard to get broken down in our human bodies and and they do pose a quite a bunch of health risks.

So I do think thinking about cookware and doing this as a slow swap out, thinking about food quality and doing that kind of swap whenever you have accessibility and trying to go for higher quality food over quantity is always a nice thing.

But that's really what I would say in terms of eating and even our drinking. You know, I won't get into drinking water, but drinking water should always be filtered whichever way you can manage.

And I can give a variety of ways that are cost effective from a water pitcher all the way in, which is carbon all the way to reverse osmosis under your kitchen sink.

So it's very cost effective. Now, you don't have to do a whole house water filter. So there's lots of ways to avoid these things entering your body willingly and it just a matter of cutting them off with good choices.

Yeah, I think that stainless steel is a good choice. How about, you know, I'm always suspicious, you know, because we've been burnt, you know, like they say one thing, but it's really something else because there's a number of cookware companies now they're saying it's it's safe, but they're, you know, stick free or stick resistant, you know, should you just avoid them and say, well, just like there's no clean coal, there's no great plastic, you know, no matter whether BPA free could be be peaceful or whatever, you know.

So would you avoid any pot that even though they claim, hey, this is a safe, but, you know, stick resistant pot, maybe just steer clear anyway or are there actually safe stick resist in pots?

Well, you know, here's the thing. A lot of people market green pans and ceramic and, you know, look, I am not the cookware police. I don't even like the cook. I like to make reservations.

Food Storage, Cookware, and Water Exposure

So, you know, when you're someone who doesn't actively live in the kitchen and really do a lot of cooking, I keep it very simple. I mean, I stick to my three pans that are stainless steel.

I also have a a cast iron pan because as you probably know, women who have iron deficiency anemia could benefit from cooking in cast iron because the food actually, especially fatty foods, will absorb a lot of the iron from

the pan.

So there's actually a reason for that for people who may want a little extra iron in their diet. But the idea is that I don't typically trust or know how to vet out cookware because none of the companies will reveal their proprietary, just like with cosmetics and, you know, Coca Cola and some of these food additives, they are not required to revealed to the consumer or the constituents of their products.

And that is where United States is so unbelievably behind or wrong, because in other countries around the world, in Europe, especially the EU and the regulatory over oversight is just so much greater in cosmetics, in so many in their food system.

So you know what I would say is we have to do the work ourselves, but keep it simple. Go back to old school materials like glass, stainless steel, and put a little elbow grease in and try to, you know, use it as good exercise is cleaning your pan if it's got sticky stuff on it.

Oh, great advice. What about with the tampons? Because that comes up all the time as a gynecologist, you know? Well, you know, our organic tampons really organic or is it really they pulling the wool over our eyes on those two?

Or maybe women should try to use, you know, sanitary pads more often when they don't have to wear a tampon. Would that be a better alternative? What do you think about that whole world?

Yeah. So it's it's complicated. I would tell you that, again, cosmetics and personal care products and even feminine care products have the same issues in terms of marketing and what they can, you know, say, profess to have as clean ingredients.

You know, look, I look at companies that are really aiming for the right demographic. There are many of them. They're all competitive. So their costs have gone down.

So, I mean, there's new tampon organic companies is and even I believe big box CVS created a whole line of CBS Organics. I saw that once. I would imagine, you know, given what you're seeing on the label, that they're probably following through, considering the lawsuits that could ensue. But, you know, listen, I think you have to vet out your company.

You can also, I believe, use EWG. I think for most of this personal care products, you might want to check that as well because they may have tested for, you know, the big ones in tampons, you know, Brazil tampons in and of themselves.

You can't even recycle the plastic. So, number one, I would avoid any tampons with plastic because it's only going to add into the oceans. It's considered medical waste so it doesn't even get recycled.

And can you imagine with all of the lifetime of tampons we've used what that does to the world. So I would say try to go with cardboard or sustainable products because they're thinking about this whole cycle of life of their products, which is really important.

Number two, I would really think about the kinds of things that are problematic in feminine care products are whether they use cotton 100% versus rayon cheaper materials that are made out of plastic.

So rayon is definitely, you know, kinds of things they use for tea bags. Yeah. You know, when it's cheaper and it's plastic coated fibers, that's tends to be a nice, you know, what manufacturers do to keep their costs down.

So think about getting 100% cotton. Think about whether it says there's pesticides used for the growing of that cotton because they are the synthetic pesticides used to make that cotton, you know, available.

There's also antimicrobials often added, which I disagree with. We don't want our vaginal canal to be affected by antiseptics, antimicrobials, you know, because it's killing the beautiful flora.

But that should be part of a natural, healthy vaginal canal that keeps us healthy. And so we don't want to be doing these, you know, antiseptic douches.

And and I'm sure you you'd agree with this. We want we want the vaginal canal to be its normal age and have a nice balance of microbes. And so I would think about that antimicrobial chemicals, pesticides, bleaches that are used to make the cotton whites.

And a lot of times they we'll talk about this on the bottle, on the container, if they're doing it right, because they've thought about these chemicals, perfumes are often added because we think of the vaginal vaginal areas as not smelling appropriate.

Right. Well, that's marketing. And we do know that those perfumes are often added to these products as additional and they have phthalates. So we know that we're getting those that load into our body through the vaginal canal.

No more great advice. Now, we talked you talked about don't wash it clean. You know, use antiseptics in the vagina. Well, in our homes, we do use a lot of cleaning products, you know, so what about cleaning products you mentioned like baking soda.

I mean, should we make our own cleaning products, you know, vinegar, water, or can we buy commercial products? And what about those rated also by the Environmental Working Group?

How should we clean our house and our clothes? Well, when I first got into this, you know, I went nuts, right? I was sort of new to the idea of environmental chemicals in their research.

And so I was sort of on this ledge where I was like making my own detergents and soaps and trying out how to melt. Castiel So, I mean, it was like a little bit of a laboratory in my home is like 15 years ago and I've since come to realize that I can do it all.

And, you know, I'd really like not to have to make my products which are which is a big time suck, but it is cheaper actually overall. And, you know, just in case people do want we have a cleaning product chapter along with a lot of others but you know, that gives you do it yourself ingredients.

So if you do want to make simple detergents surface cleaner window cleaner, oven cleaner, they're not complicated. If you go back to old school ingredients, things like, you know, white vinegar, that's never going to hurt anybody.

Sea salt for scrubbing essential oils that you know, that you vetted for being safe and not fake and filled with phthalates. So we have all of that in the book.

But for the mere mortals like myself, I am not making products anymore. So I defer to groups that really do this work and vet out cleaning products and and cosmetics like Environmental Working Group is one of them.

And, you know, so there is a lot of ways to just buy, you know, a couple cleaners in your home under the same brand that's well vetted and you're done and just, you know, really try hard to scoop up crumbs and things that we normally might be a little lazy about if we think we have all these, you know, crazy toxic chemicals to do the work afterwards, we have to work a little harder, perhaps, but by no means do we need these chemicals in our bodies.

And they get into our bodies because we're living in our homes that we brought them into. So dust animals that lick their paws like my my pets. Kids get stuck to toys and they put things in their mouth.

We don't want those cleaning products that have toxic chemicals in our home or workplace. If you can avoid that here, I bring my own work, my own cleaning materials, but it gets into dust and that's been well studied.

Dust is one of the biggest areas of collections of horrible chemicals, from flame retardant chemicals to phthalates to parabens to, you know, antimicrobials.

Tampons, Cleaning Products, and Dust Exposure

They it just everything culminates in dust. So one of the ways to reduce exposure into humans is also to dust more regularly. And therefore, you know, if you can't get rid of the source, which is my first choice, then at least try to you know, make sure that the end products of dust is is limited.

Well, yes. And everyone gets plenty of dust. So that's great advice as well. And you mentioned toys. A lot of our viewers are young women who have children.

So is there a way to look at the safety of toys? Like you mentioned, everything goes into a little kids mouth and a lot of those products are probably coated with kind of unpleasant, unhealthy items.

So what about toys? Is there a way to vet them? So interestingly enough, and I talk about this in the book with with new moms and women, people thinking of getting pregnant toddlers.

We have a lot of that mentioned because we know that that's a concern. So, you know, in several years back, I can't remember the exact date, maybe it was 2006, there was a lot of toxic plastics removed from baby toys.

And I give a list and it doesn't really pertain to moms now because if you're buying and dads now, because if you're buying toys in the U. S. now, it won't have those chemicals if it was manufactured after the date of, say, 2000 1026, I don't know the exact date.

So you do want to know how old your toys are. And the problem is, unfortunately, is that a lot of people I mean, good and bad, we want to recycle, but we're giving our toys to other people to save money, which is a great idea.

But if those toys date back prior or to the date those chemicals were taken out, then those U. S. made products might be more harmful in terms of, you know, putting it in the mouth.

If you get newer toys made within the U. S. or most are made in overseas in China, and there's not a lot of oversight, but it's really the U. S. manufacturers that have to hold to that law.

So, you know, I do recommend people trying to swap products that are within the last five years, if you can, so that, you know, they're made in the U. S.

and then they have an outdated been outdated for the plastics that they contain. There are certainly companies that are full on searching for the demographic who are conscious of chemicals, and they make sure their paints are certainly nontoxic.

You know, many of us have given those toys or received them. So they're they're out there European toys often chewing toys are maybe better because of the the regulations and oversight.

I know that there's a draft that we often give as gifts that's kind well known to be one of the safer ones from a European country, and that's for chewing.

But silicone is actually considered in case people are wondering about the baby bottle nipples. We have to think about silicone as being one of the safer plastics.

And you're not supposed to give up, you know, silicone baby bottles because there's no alternative. And so I think that those are very much considered safe in terms of U. S.

made bottles. Well, that's really important to know. I remember when BPA was in baby bottles, that was an unfortunate decision. But luckily that those have been removed.

And what about clothing like for adults, but maybe predominantly for kids like the flame retardant products? Is that still going on? Are they putting these chemicals in so that there's not like the risk so much of fire, you know, the

clothes going up in fire or what about clothes?

And what about when they spray it, you know, like stain, you know, and stain resistant, you know, kind of coatings and such. Right. So we'll go back a hat tip to the BPA researchers who remove BPA from baby bottles in 2012, which some of your listeners may remember.

But my actual coauthor is Dr. Frederick von Saal for both the textbook and the consumer book, and he is literally considered the father of BPA research and was instrumental along with colleagues internationally of getting BPA unfortunately limited only out of baby bottles and sports bottles in plastic, of course in in 2012, because of the overwhelming data on endocrine disrupting effects.

I mean and if we could argue that in baby bottle plastics and sports bottles, which of course now they substitute with a bunch of others that haven't been removed, you could argue that BPA across the board, including canned foods, would be a good idea to move away from canned foods, which most canned foods, organic and otherwise, are lined with BPA.

And that still has not been removed. But I wanted to give a hat tip to some of the real heroes that never make it to the media, who do all this work and actually change the way we provide purchase products, you know?

But, you know, so in terms of flame retardant, that was a lot of the work of Arlene Gillam. And she is out of UC California, Berkeley, and she's still doing her work.

And she's really extraordinary. But she really does monitor a lot of the products and how they are maneuvering around these chemicals. And so I think her website is Green Science Policy, Dawg, and she, of course, is featured in the book as well under, you know, home furnishings and resources for couches without flame retardants.

But she did a lot of the work on in the seventies on flame retardant chemicals and pajamas, which was touted as a safety measure, which really turned out to be a hot mess, because everyone all these children were developing high levels of flame retardants in their blood that was tested and urine.

So we've since moved away from that. As far as I'm aware, there are no pajamas for children that are allowed to have flame retardant chemicals, which are toxic in so many ways that I worried and hormones and growth development.

But but of course we have similar chemicals to these flame retardants, often fluorinated with fluorine or brominated, with bromine, very toxic components of these compounds that live forever in our bodies and attach to even to the thyroid gland, which usually has iodine.

So they replace. So we can have a lot of thyroid issues. But the idea is that stain guard greaseproof waterproof are our really catch words that we want to avoid if we can.

Obviously people want a raincoat that doesn't leak water, but those are limited, you know, periods of time and there are options for that as well. But if you are going to argue for waterproof backpacks, greaseproof wrappers, stain guarded spray on the couch, which I did many years ago, I sprayed a whole couch and said, Let's play on it.

I didn't know better, but those are things you want to avoid because they do make their way into the into the human body and can cause problems. And what about bugs?

Is there any safe insect repellent or you just have to accept that you're putting pesticides on yourself or in your environment any way to keep those bugs from invading your home?

Well, there's a variety of ways using natural oils. It's eucalyptus.

Toys, Clothing, Pesticides, and Practical Next Steps

There's just a variety of ways to do this naturally. Now, you know, people talk about certain cosmetics, like skin so soft from, you know, that was like an old, you know, remedy for for bugs and mosquitoes that no one knew until they used it for their, you know, for their skin lotions.

Well, it's very interesting. So, you know, we have been trying very hard to remove pesticides from our home, which includes, by the way, you know, flea and tick collar chemicals, which I, again, put on my dog and don't do anymore for my animals.

We wash them more regularly. We we keep them cleaner and we try to avoid, you know, environments where they may cross contaminate with, you know, with fleas and ticks.

But the idea is that those are neurotoxins. I mean, pesticides are a big term for things that are pests, whether it's an insecticide herbicide. And there's a variety I talk about in the book to understand what the word pesticide encompasses, but many of them are neurotoxins and so among other issues.

And so we have Parkinson's risk with these exposures, you know, highly connected. You know, it's just one of those things where we don't want to add these things into our lives, into our home environment, where we can absorb them.

So we've moved away from bug sprays and we've been using natural things like for instance, we had mice in our kitchen, so we used very strong mint peppermint oil and it helped quite a bit.

And you know, so there are things that we now know are noxious to these critters and there's ways to beat them at their own game without having to put our health at risk.

And I think that's a really key thing to understand. It's just takes a little bit of understand we we didn't hit that entirely. I think it deserves more attention than I had room for in the book, but I certainly allude to different locations to find that information.

There's there's pesticides without harm or there's there's a bunch of different places. We talked about learning how to do natural gardening. You know, it's called integrated pest management or IPM.

We talked about and gave some nice resources for for bugs bug management. It's interesting. I'm about to go with my family to Costa Rica for our big holiday.

And I started reading about, well, what bugs are down there that are different from New Jersey so I can kind of way out. Do I want DEET in my pet in my spray or do I not do I want to try to use the natural stuff?

So I've opted to bring both and play it by ear. But the idea is that, you know, there are times when heavier hitters like DEET are very important. When you have West Nile virus that's endemic, when you have Zika, when you're going to endemic places that you're not familiar with the territory and you've never experienced those bug, you know, dengue fever, yellow fever.

I mean, these are things you don't want to have as an infection. So at that point, the the risk doesn't outweigh the benefit of that exposure to that chemical. If it's temporary and you're washing it off and you're using it judiciously.

Sometimes the the infection is worse and the short term exposure to the pesticide, I totally agree. You know, to many people that got dengue fever. So yeah, do be careful but have a great time.

And this has been such a wealth of information because it can be so overwhelming once it's acknowledged within an environment of chemicals, obesity, genes, diabetes agents and, you know, things that are just wildly endocrine disruptors.

Everywhere we turn, it can be overwhelming and so frightening. But you really present it in a way that, you know. Yeah, this stuff is out there, but we have ways to dramatically reduce exposures for ourselves and our families.

So this has been so wonderful. I'm telling everyone your book and I'm going to ask you to like name it where they can get it again and how to follow you and your, you know, your platform because this is every home environmental Bible, right?

Everyone should have this. So go and just explain again how to follow you and your platform and how to get your book. Okay. Thank you so much. I appreciate.

And I want to just mention, you know, as you said, it is overwhelming. And I've been I've been up and down and left and right over these topics because, you know, my kids play sports and they're on, you know, synthetic turf.

Do I take them off the field? But no, they're athletes. So there's all these challenges, especially as your kids even move through different age groups and what their exposure is.

It's a journey. I want people to know it is a journey for everyone. It was a journey for me and it still is. And I think when people realize that you're going to have to be on a rush, that you could do it well and do it, you know, one, one swap a week, one swap a month, you know, do the things that feel comfortable.

So they stick. And so that's a really important message that people don't feel like they're harming their children and it's their fault or they're the cause of this or that.

I think it's really important to do it right instead of fast. So I just hope people will appreciate, you know, we did a guidebook. It took seven years for me to really put this together with my partner, Dr.

Frederick von Saal, who's brilliant. He's a grandfather. He's an incredible, world renowned researcher in reproductive endocrinology and neurobiology.

And he's brilliant. And on my mom, who's the rheumatologist. So, you know, we really came together with all of our life experience and all our professional experience to give people really, I think, creative and smart information.

And it's called Nontoxic Guide to Living Healthy in a Chemical World. And, you know, it's available on all the different sites like Amazon and Barnes & Noble.

But really, people want a little bit of nuggets of good information on nutrition, diet, mental health, chemicals, autoimmune disease, rheumatology, PCOS.

Please follow The Smart Human. It's all called The Smart Human for that anthropological piece that I like people to know about. And it's on Facebook, Twitter, Instagram, Tik Tok And I also have a podcast called The Smart Human Podcast and also the website, thesmarthuman.com where you can sign up for our newsletter.

So yeah, I'm just trying to get the word out there. And if you want to see the TED talk I did on chemicals and children and children's health, it's worth looking up on YouTube.

But yeah, it's just education and everyone has an opportunity to sort of spread the word. Well, I can't thank you enough, Aly, for joining me. This has been an eye opener, I am sure, for the vast majority of viewers to really understand their environment and even more so what they can do, the positive actions they can take to lower their risk.

So this has been fantastic. Thanks so much for joining me and I look forward to seeing your new book. I hope that will be on the bookshelves pretty soon.

Thank you so much for always. Always a pleasure to work with you and please continue to do your thing because it does take a village. So thank you.