

Lauren Clouser [00:00:06]:

Welcome to the LDA podcast, a series by the Learning Disabilities Association of America. Our podcast is dedicated to exploring topics of interest to educators, individuals with learning disabilities, parents, and professionals to work towards our goal of creating a more equitable world.

Tracy Gregoire [00:00:24]:

Hi, everyone. I'm Tracy Gregoire. I'm the director of the Healthy Children Project for the Learning Disabilities Association of America. Today on our podcast, we're gonna be talking about Chlorpyrifos and Organophosphate pesticides. You might wonder why LDA is talking about pesticides and other neurotoxins. Our Healthy Children Project works to eliminate the preventable causes of learning, attention, and developmental disabilities.

We can't change our genes, but we can reduce exposures to neurotoxins that can harm children's brain health and learning potential. Today, I am honored to have as our guest Noorulane Jan, teacher turned lawyer, who is now an associate attorney at Earthjustice. So, Noorulane, would you please introduce yourself and tell us a little bit about your work?

Noorulane Jan [00:01:20]:

Sure thing. Thanks, Tracy. Well, you introduced me just right. I'm a teacher turned lawyer, so I started teaching high school for 3 years, 10th, 11th, and 12th grade. My certification was English Language Arts and Reading, or ELAR as some ed folks call it. In my classes, I taught ESL classes specifically, but in those classes, I had several students who were in special education. So for those 3 years I was following and reviewing IEPs or individualized education program plans, monitoring the students, attending ADRs, making sure I'm giving the accommodations that they're due, and meeting those kids really where they're at. And while I was teaching, I grew to care about a lot of the kids on a personal level.

Noorulane Jan [00:02:06]:

I realized that meeting students where they're at in education is not something that we do in this country very often, but that was my job as a teacher. Particularly because even though they were teenagers and even though they were ESL students, which is English as a second language students, they were kids. Right? And I think my passion around protecting children's brains and their learning and protecting that fiercely translated into my law school career where I took classes like Special Education in the Law and the Americans with Disabilities Act, a practicum course on it. And that was really where I learned that I was implementing Section 504 without even knowing what it was as a teacher. Like, everything I was learning about in cases I had already done as a teacher 3 years prior, which is kinda cool, but also kinda scary because I didn't know why I was doing what I was doing. I just knew that that was the law and that I had to follow it, and I had to do so zealously for the sake of my children and their learning. And when I was thinking about how, as I've come to be an attorney now, I'm trying to incorporate a disability justice framework in the work I do here on pesticides at Earthjustice. I think about how a lot of the stigma around learning disabilities and folks with learning disabilities negatively impacts

everybody.

Noorulane Jan [00:03:32]:

Right? Especially because of the people with learning disabilities, the thing that all this advocacy is about, because they are the ones that are directly impacted and experts in their own experience. It's learning disabilities and other cognitive impairments or cognitive functioning. It seeps into everything. And it starts when they're kids and students. And by everything, I mean, it seeps into how they show up in employment, their financial security, eventually their romance and their social lives, how they find love, how they find dating, how they find integrating into the American workplace as they get older. So all of that and, unfortunately actually, one more encounter, which would be with the criminal law system, where that is an unfortunate reality that we're not training folks to be accommodating to people with learning disabilities in all the different spaces that I just named. So on that, I took my passion to Earthjustice, like I said, and I'll just quickly tell y'all, Earthjustice is a nonprofit legal organization.

Noorulane Jan [00:04:35]:

We practice environmental justice and environmental law at 15 offices across the country. And we work closely with communities. We make sure that frontline and fence-line communities are heard in the courts. And when they're not, we take people to court to make sure they are.

Tracy Gregoire [00:04:54]:

Thank you so much. And I know you're you've got a passion for protecting brain health like I do, and it's great to work with you and Earthjustice on all sorts of issues, including Organophosphate pesticides and lead and other neurotoxins. And as you said, like learning disabilities, ADHD, autism, all of these different disabilities that impact how children's and adults' brains work. Right? They work differently because of these disabilities.

And making sure that people have accommodations and have the supports they need in their life, which includes social aspects as well as jobs, and preparing and being successful in jobs, like, their whole lives are impacted. And we need to do a better job at being more accepting and supporting of neurodiverse populations. But we in the Healthy Children Project really focus on both protecting children's brains and their learning potential now and also preventing these disabilities by looking at chemicals and other environmental factors that can affect people throughout their lives.

Tracy Gregoire [00:06:18]:

So we talk about prenatally and protecting pregnant women because you want to protect children prenatally through really into their twenties. We know those brains are developing into their twenties now. And also people just care about protecting their general health as well. And I know as a mom with a child with a disability or any kind of challenges, you want to prevent impacting their health in any way, including their brain health. So that's one of the reasons why we work with Earthjustice on Chlorpyrifos and the Organophosphate pesticides. Big words, but, basically, Chlorpyrifos is a pesticide that's been used for a long time and is acutely toxic.

Tracy Gregoire [00:07:13]:

And there are strong links to neurological harm. And some of the people who are most impacted are the farm workers, people living in the area where they are applying these pesticides, and, to the end, consumers, where people are consuming fruits, and why we're working on this in organophosphate pesticides as a class.

Noorulane Jan [00:07:43]:

Thanks, Tracy. Yeah. And I'm glad that you ended on organophosphate pesticides as a class because Chlorpyrifos is not the only one that we have to be worried about when it comes to children's brain health. Organophosphates, again, it's a big word, so I'm gonna just call them OPs for the rest of this podcast. They work in the same way that a nerve agent does. And the best way I can explain this is, like, when you use a can of raid on a roach, you see the roach kinda slow down and then eventually die off. It's that same kind of neurological process or nervous system process that OPs do for humans when they have acute exposures, so farm workers and then for, in utero fetuses, and then children later on when they have that exposure as well. The childbearing parent has that exposure.

Noorulane Jan [00:08:32]:

So what they do is they do this thing that, like, basically, when the chemical gets into you, it slows down your nervous system's healthy functioning. Right? So when somebody throws a basketball at you and you catch it, right, that's your impulse control coming in or lack of control depending on where you're playing. But that's what's impacted by OPs. And so that's why we care so much about it because we don't think that we should have chemicals in our society that impact, that slow down, that inhibit the healthy nervous functioning of farm workers and of children and of us all, really.

Tracy Gregoire [00:09:13]:

Absolutely. And we know the scientific studies overwhelmingly show that prenatal and early childhood exposure to Chlorpyrifos, it's an acutely toxic pesticide and even at low levels can disrupt children's brain development and can result in lower cognitive abilities, behavior and attention issues, learning disabilities, and developmental disabilities like autism. So, you know, LDA is so thankful that we get to work with Earthjustice and farmworker groups across the United States, and others, for over well over a decade on Chlorpyrifos. And we had a big win, and then we just had a loss. And we need people to engage people and understand where we're at with Chlorpyrifos. So, Noorulane, can you explain a little bit about how we want to ban and where we're at right now?

Noorulane Jan [00:10:09]:

Sure. Yeah. So we've been at it a long time. Earthjustice has LDA and our other partners. It started in 2007 because we've posed the problem for y'all here. Right? There are these dangerous chemicals. So who's doing what about it? At the time, we said that the EPA should be doing something about it. So we got them, we wrote a little petition asking them to do

something about Chlorpyrifos, and mainly banning it from all of our food, our national food supply.

Noorulane Jan [00:10:40]:

I'm gonna dip into the legal standard just for, like, a half a second. I promise I won't get crazy with it, but it's just important to know so that you know how EPA is regulating these chemicals and Chlorpyrifos specifically. So that when I tee up what happened and how we lost the ban, y'all know exactly what EPA is looking for. EPA can't allow any residues of a pesticide unless it can make a reasonable certainty of no harm from aggregate exposure to that pesticide, including for infants and children specifically. And that legal standard came out of this awesome act called the Food Quality Protection Act in 1996. So EPA has a statutory obligation, meaning it's required by law, to consider how a chemical would impact infants and children before it allows for any residues of it to be used on our food supply. So we argued that in courts for, like, over a decade. Right? We went back and forth with the EPA.

Noorulane Jan [00:11:37]:

They said they were doing it. We said you didn't do it good enough or fast enough. And, eventually, the 9th Circuit, which is the court on the West Coast or encompassing most of the West Coast states...agreed with us. Right? And so in, 2021, we were able to get Chlorpyrifos banned because that court acknowledged that based on the safety record in front of it so like Tracy mentioned, the studies and everything, Based on that, you can't find Chlorpyrifos safe, and safe meaning the legal definition of that term. Right? So we were really ecstatic. EPA did it. It issued a little rule, which is what it does when it wants to make an agency decision, and then we got Chlorpyrifos off. But then, I think, we found ourselves not back at square 1, but back at square 2 because a group of grower organizations.

Noorulane Jan [00:12:36]:

So these are very clearly farmer organizations. I did not say farmworker, and, like, crop growing associations that challenge that decision to ban Chlorpyrifos, EPA's decision in the 8th Circuit, which is a different set of courts over a little bit on the map of the country, I guess. So in that circuit, they were able to get that court to strike down EPA's rule banning Chlorpyrifos, which I think, Tracy, you might know, leaves us in a pretty precarious spot in terms of chemicals on our food. So I think to frame the issue really clearly here. Right? We secured 100% of Chlorpyrifos gone from our food in 2021. Now, we are back to seeing 100% of Chlorpyrifos being allowed on our food. EPA is trying to move forward at the right way to do things here, so they are trying to get 45% of the low use foods banned again, which is helpful.

Noorulane Jan [00:13:47]:

But then there's a subset of allegedly high use foods that EPA is not getting at, and those we've observed to be some of the most harmful uses.

Tracy Gregoire [00:13:58]:

Noorulane, can you share some of those uses? And, also, I just wanted to point out the EPA is

the Environmental Protection Agency when we throw out some of these acronyms here. But, what are some of these uses? And can you also explain, like, residue? Because I heard you talking about residue, or food residues.

Noorulane Jan [00:14:19]:

Sure. Yeah. So good catch on defining EPA. Sorry, y'all. I hate acronyms, and I should've. I've been having such a hard time with them. But, yeah, a residue, I'll answer that question, and then go into the uses. So, the way we regulate pesticides in this country on our food supply, there are either registrations for those pesticides. Well, sorry.

Noorulane Jan [00:14:44]:

Not either. There are both registrations for those pesticides. And then for the ones that are used on food, there are these things called tolerances. And a tolerance is a legally maximum amount of residue that's allowed to be left on a food. So, like, think of, like, a coating or maybe some, like, missed particles of a given chemical. Right? They are residues on fruit supply that comes into produce stores and produce sections. And in the EPA's eyes, there is an allowable limit to those that people can eat and allegedly not be harmed by it. Based on that, though, I'll jump into what are those uses are because the amount of uses that EPA doesn't seem to be going out for Chlorpyrifos again are the ones that are, again, allegedly high use, very harmful, and they're significant because they cover, about 10 crops.

Noorulane Jan [00:15:42]:

It was 11, but I'll go into why it's now technically 10. And those are things that are gonna be crops that you might be eating in your diet every day, listener. So things like alfalfa, apples, asparagus, cherry, citrus, cotton you're not eating, I hope, but you're wearing, peach, soybeans, sugar beet, and strawberries, and spring and winter wheat. The strawberries note, that was only for Oregon, and Oregon has since banned Chlorpyrifos, which we love. So strawberries can't have Chlorpyrifos on them. Oh, well, I mean, technically, they could right now because we're at all uses allowed again for a given time. It's really important to note here just so that we can be legally accurate.

Noorulane Jan [00:16:23]:

That doesn't mean that every cherry in the nation is gonna have Chlorpyrifos on it. The thing about these, 55% or these allegedly high uses, would only be allowed in certain parts of the country with certain restrictions on how the pesticide is applied to that crop depending on the geographic restrictions. Right? If they're a lower state or an upper state, it's gonna change, and the way that the pesticide is applied to that crop. So instead of an aerial applicator, which is like that plain, you would get, like, just individual hoses or individual farm workers with hoses. So those states are quite a lot, and I'm not gonna name them right here. But they're in the mid Atlantic region. They're definitely in the south, which is where I'm from and I love. They're in the great lakes region as well, and then you'll see some in, like, sporadically in Ohio, Tennessee, and Upper Mississippi.

Noorulane Jan [00:17:20]:

And the reason before I turn it back to Tracy, the reason that we care so much about getting all of Chlorpyrifos use is banned again and why you should be encouraging, listener, EPA, to ban Chlorpyrifos a 100% again on our food is because this is about the incoming generation of American children or children in this nation. Right? We didn't have Chlorpyrifos for 2 years, and we didn't see a huge price raise in produce that wasn't related to inflation. But this is really about black and brown children and low income rural kids. Those are the types of children that are gonna be in close proximity to these kinds of chemical exposures, particularly to OPs and Chlorpyrifos. And this is about protecting their brain health. And this is, at its core, an environmental justice issue. Tracy, I'll turn it back to you before I get on my soapbox.

Tracy Gregoire [00:18:12]:

Yeah. Thank you. No. And LDA wants to protect the people who are eating the fruits and vegetables. Right? But we also know and fight for the people that are most impacted. So, like you said, right, it's, the rural communities, low income communities, communities of color that are, not just being exposed to Chlorpyrifos, but a lot of other chemicals as well, like, disproportionately impacted because of the amount of chemicals and neurotoxins, that they're being exposed to. So when I talk to people about, you know, one chemical, like Chlorpyrifos, the thing is we're not just exposed to Chlorpyrifos in one situation. Right? There are communicative exposures, which means multiple exposures and also synergistic exposures, which I think of as, like, a mix of different chemicals being people being exposed to.

Tracy Gregoire [00:19:10]:

So science and EPA folks don't really look at cumulative impacts. We should. We try to, but it's hard. So when they say there's an allowable amount, that's not necessarily and often isn't a safe amount. Because if you have one product or one apple, it's not like you're just being exposed to Chlorpyrifos in the apple and only that neurotoxin. And for these communities that are farming communities, the farm workers themselves who are most impacted, they're being exposed to the most Chlorpyrifos, which, you know, that's the level we need to look at. What's safe for the people who are most exposed?

Noorulane Jan [00:19:57]:

Mhmm.

Tracy Gregoire [00:19:57]:

And I work with and Noorulane works with farm workers and farm worker groups. And I know colleagues who were sprayed and exposed to Chlorpyrifos, having kids with learning disabilities or ADHD or having birth defects and other neurological impacts. Right? So we're talking about this as an environmental justice issue because it's, you know, who is most exposed. And, yes, you want the amount on your fruit and vegetables to be safe, but we also need to look at the farm workers and the communities who are most exposed. So, you know, I know Noorulane and I care about education and both have education degrees. So why does this matter? Why does all of this matter in the special education context?

Noorulane Jan [00:20:52]:

Yeah. Also, I don't have an education degree. I serendipitously found myself in education. Sorry. I don't want anybody to Google me and be like, she's lying. But I think that this matters in the special education context for several reasons. Right? Scientifically, we know what the studies show, which is that there is this very strong causal link with Chlorpyrifos exposure at levels that exceed the level that EPA regulates at. And that means that those, like, in utero exposures or when a fetus is exposed, that typically lives with them as they have typical brain development, which means that their brain development is altered.

Noorulane Jan [00:21:32]:

So we care about it really, like, back down to the basic core functioning of where all our learning happens, which is in the brain. Beyond that, though, as a social policy matter, we care about this with special education because this impacts services that are required for children to show up as their best selves in the classroom and take the best that they can from that classroom.

Children in this nation have a right to a free and appropriate public education, which means that they should have the right to be given the accommodations that they need to excel just like their peers who might not need the same accommodations. Right? And it's no secret to anybody, right, that all schools in America are not equal. Some schools are not resourced the way they should be, and they are not thus set up to provide those students with the things that they need and have a right to to have a fruitful education. And that means, when I think about the gaps in the classroom, right, the things that you're not learning in the classroom, that transcends beyond the classroom. Right? That means that there's so much that you could have taken from...like, I'll say an example. I taught Macbeth.

Noorulane Jan [00:22:46]:

Right? You could have taken a lesson from Macbeth. I don't know what it would be, but you would take one. And then you would let that lesson permeate in your other ways. Right? Like, it's a conversation that you have with a friend in the hallway, a project that you do for your history class when you're trying to talk about Europe or whatever. Like, that it's never just siloed. Like you said, cumulative impacts are never just about one thing. It's the same way with impacts to education. It's never about one missed lesson.

Noorulane Jan [00:23:12]:

It is about where the kids are at and making sure that they have what they're entitled to under the law, which is to walk away with their mind opened by whatever they learned in class that day. And I just wanna point out because you mentioned farm workers, Tracy. I'm very passionate about working with farm workers and blessed to be able to work with farm worker unions and directly with those impacted themselves. But, also, when I was teaching, I told y'all I taught ESL. A lot of the things that our students have to deal with in the classroom, that also transcends to their parents at home. And a lot of parents, especially where I was teaching, was a Latino heavy area, there are language and class access barriers. Right? Even beyond

language barriers, there's class access barriers for their parents to really engage in their education. And so what does that mean? That means whenever you're having, like, IEP meetings or meetings that are about, school discipline on a kid, if you're not providing a translator, that interpreter, a parent does not know why their child's in trouble, what is the cause of the trouble, and why their student was acting out. And that's three things that a parent should be entitled to. I mean, I don't know. I'm not a mom. Tracy, you're a mom. Maybe you can speak to it, but you can't be there for your kid if you don't know why your kid's acting the way they are.

Tracy Gregoire [00:24:32]:

Absolutely. And I have personal experience that when you know, and families that I know when there's an IEP in place, and there's an autism diagnosis or an ADHD diagnosis or some kind of learning disability, which, you know, includes social aspects as well. Right? A lot of these disabilities impact kids' ability to be able to interpret things socially and interact with other kids. When you have an IEP and services in place, the consequences are different. And there's understanding of what's happening and more importantly, how to prevent those behaviors in the future. And we know that, as you said, not all schools are equal in their funding and their resources and the number of paraprofessionals or ed techs, and that impacts the child. And unfortunately, the pipeline to prison is real. Like, there's a lot of people in prisons who didn't get accommodations.

Tracy Gregoire [00:25:39]:

They do have a learning disability or some kind of neurological disability, and they didn't get the accommodations they needed and support that they needed. Right? And they were acting out, and it led to a different lifestyle. And we also are learning lead exposure, lead poisoning as a child can come out and lead to aggressive behaviors later. So there's a direct link there. So, it impacts not only the child, their community, their school, but also the justice system and the broader community. Right? It costs twice as much to educate a child with special needs on average, and they absolutely deserve those accommodations. But there's a cost, but there's also the emotional cost, right, when you're not supported in getting what you need and can grow and learn those social aspects and learn the material you need to know to be successful in life, it impacts everybody. Right? And so, you know, I think it's so important when we're talking about this to see the whole person and the community as well, and I love how you put it in the special education context.

Tracy Gregoire [00:27:00]:

So now that we know, you know, we were like, 1, going on to other Organophosphate pesticides. I wanna talk about what we can do now because the good thing is that the Environmental Protection Agency, the EPA, wants to do something. This technicality and this court decision was not based on the science or that, you know, it was this Chlorpyrifos is not, harmful, But we really need to make sure the next step is to ban all of those uses that can be harmful to children and children's brain health, and then move on to other Organophosphates. So let's talk about what people can do and what LDA and Earthjustice and our partners are gonna be encouraging people to join us and do, on Chlorpyrifos.

Noorulane Jan [00:27:51]:

Yeah. Before I get to that, I hope you don't mind if I just spend, like, 10 seconds, going back to something you said because I had a reaction. And as a teacher, you know, I wanna remind listeners that students, especially those with disabilities, are not just dealing with the factors that are in their lives, but they're also dealing with factors that are in their teachers or other decision makers' lives. And that includes racial biases, and just straight up racism sometimes. I think it's not just discipline that's related to outgoing behavior or something or outrageous behavior. Right? That's one thing. But then discipline related to the perception of danger from a student is another thing. And I think, like, when we think about statistics on young Black children, particularly Black girls seeming, like, perceived as aggressive when they do the same thing as their white counterparts in schools, like, we got it.

Noorulane Jan [00:28:41]:

When we think about it in special education And that means societal factors like racism and classism. That aside, I will go ahead and address what is the action with the restrictions, we need you, 1, to stay tuned to see how this plays out. EPA has not yet acted on that procedural change that the 8th circuit made and or the procedural catch that the 8th circuit made and thus caused the whole band to fall. We don't know what's gonna happen. They have expressed, in their own publications, that they're gonna be going for those low uses, allegedly low uses first. And so when they do, we need your help reminding the EPA that their job is to protect the public, and their job is to think through an environmental justice centered lens. And if they know that Chlorpyrifos is unsafe, which is still good law from the 9th circuit, the acknowledgment that Chlorpyrifos is unsafe in the legal definition of that word, EPA has to act accordingly and ban this chemical for good for all.

Tracy Gregoire [00:30:01]:

So talking about what's on the horizon and what we're gonna need to do as individuals and organizations on chlorpyrifos and those half or over half of the uses probably gonna be allowed to be used. So what do you think is next that we can do and what we're gonna need to do to get back to the point where all food uses of Chlorpyrifos are banned?

Noorulane Jan [00:30:28]:

Yeah. That's a great question. So when we anticipate that over half of the uses of Chlorpyrifos will be left to be allowed on food, we're gonna have some key decisions to make with our partners like LDA and our farmworker justice partners. There's a couple things. Right? We, as always, the public in this country, including individuals and organizations, can apply pressure to EPA to show them that that's not enough. When they do end up banning, less than half of the uses of chlorpyrifos, we can be there to engage in the public comment peer process and let them know that that's not enough to be protective of the public, which is their job as a regulatory agency. And also on the legal front, so public participation is always a key thing for us to be able to engage in and be active on.

Noorulane Jan [00:31:24]:

But also on the legal front, if we see that EPA is not confronting the science that the 9th circuit had ordered it to do, if we see that it's not acting in accordance with scientific principles, Earthjustice and its partners will be there to make sure that EPA does so, even if that means taking legal measures, to make sure that kids are protected and farm workers are protected and everybody is protected from Chlorpyrifos.

Tracy Gregoire [00:31:50]:

Wonderful. And I know we say comment period, and it sounds kinda scary, but literally anybody can go online and submit a comment as an individual. Certainly, LDA will or just as well. We'll get other partners to do that. But I think those personal stories about why you're concerned about Chlorpyrifos and that you want the EPA to act now and not wait another decade or 2 to take action are really important. And they have to look at each and every one of those comments. So we will be sharing how to do that when they come out with their proposal and encouraging people to do that because I think it's really important. LDA, I think, makes a difference, Earthjustice does, but each individual does as well.

Tracy Gregoire [00:32:34]:

And sharing your personal story or just saying, hey. I'm really upset that over half of the uses are being allowed, and we need to be in all of them. The science is clear, and it's time, it is also really important. So we will be there with Earthjustice and partners, encouraging you to act and keeping you updated on the latest and how you can be involved. And, Noorulane, I'm so thankful that you joined me today to talk about this issue, and I'm sure we'll have more to share in the near future.

Noorulane Jan [00:33:06]:

Thank you. Thank you for inviting me on. It's been a pleasure.

Lauren Clouser [00:33:16]:

Thank you for listening to the LDA podcast. To learn more about LDA and to get valuable resources and support, visit ldaamerica.org.