Protecting Brain Development in Children: Neurotoxic Effects of Phthalates and the Need for Critical Policy Reform

Presentation by

Katherine O’Brien, J.D.
Rashmi Joglekar, Ph.D.

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Because the Earth needs a good lawyer.

Photo Credit: Subhankar Banerjee
Because the Earth needs a good lawyer.

Climate & Energy
Preserving the Wild
Healthy Communities
Toxic Exposure and Health (TEH) Program

1. Using the new TSCA and other federal laws to protect workers and communities from toxic exposure

2. Helping communities contaminated with PFAS and other toxicants

3. Identifying and using the best available science on toxic exposure and chemical risk

Toxic Exposure and Health Team

- Kartik Madiraju, Associate Attorney
- Eve Gartner, Managing Attorney
- Jonathan Kalmuss-Katz, Senior Attorney
- Rashmi Joglekar, Staff Scientist
- Lakendra Barajas, Sr. Associate Attorney
- Katherine O’Brien, Senior Attorney
- Tosh Sagar, Senior Attorney
- Alex de Mucha Pino, Sr. Program Associate
- Kadijah Sutton, Litigation Assistant
- Isabel An, Litigation Assistant
- Kelly Lester, Associate Attorney
Phthalates are ubiquitous pollutants

- Ortho-phthalate esters
- Added to plastics to make more flexible and durable, found in high quantities in PVC (polyvinylchloride)
- Endocrine disruption, male reproductive malformations, neurodevelopmental harm, infertility
- Widely found in food packaging materials, medical devices, children’s toys, building materials, and fragranced personal care products
Phthalates are ubiquitous pollutants

Found in over 98% of people living in the U.S.

- NHANES Data, CDC
Phthalates take a toxic toll on our health

- Endocrine disruption
- Birth defects
- Miscarriage
- Lowered IQ
- Behavioral disorders
- Learning disabilities
- Low sperm counts
- Infertility
- Miscarriage
Cumulative exposures compound risk
Health disparities in phthalate exposures

- **Infants & children** face disproportionate phthalate exposures
  - Crawling, mouthing, small body size
  - Birth defects, neurodevelopmental harm
- **Black and Latina women** also face disproportionate phthalate exposures
  - Black women of reproductive age bear 12% higher phthalate body burden than white women
  - Adverse reproductive outcomes
  - Fast food consumption is major driver of dietary exposure disparities
Health disparities: Arctic Indigenous Peoples

- Persistent organic pollutants are pervasive in Alaska and Arctic
- POPs often originate from thousands of miles away, and disproportionately accumulate in people and ecosystems
- Arctic Indigenous Peoples have among the highest chemical contamination on Earth

Vi Waghiliy, Alaska Community Action on Toxics (ACAT)
Legal frameworks governing phthalates

- **Food & Drug Administration (FDA)**
  - Food & food packaging
  - Pharmaceuticals
  - Cosmetics/personal care products

- **Consumer Product Safety Commission (CPSC)**
  - Consumer products
    - Children’s products

- **EPA**
  - Chemical manufacturing, use, disposal
  - Environmental releases
  - Presence in environmental media

- **State Laws**
  - Reporting requirements
  - Use restrictions in certain foods/consumer products
Legal frameworks governing phthalates

FDA is responsible for ensuring the safety of the food supply.

FDA has a legal duty to ensure the safety of all food additives, which includes chemicals used in food-contact materials that are known or expected to migrate into food.

FDA’s safety evaluation must account for the cumulative effects of consuming multiple related chemicals.
Phthalates on our plates in 2016

28 phthalates approved by FDA for use in food packaging and processing equipment, with expectation that the chemicals will migrate into food.

These approvals are based on data and analysis that is 30-60+ years old.

8 of the phthalates approved for food-contact use already banned from toys because of health hazards.
Holding FDA accountable

2016
Health and environmental advocates file two petitions to revoke all approvals for food-contact use of phthalates.

2016-2021
FDA takes no action, despite legal duty to decide principal petition within 6 months.

2021
Advocates sue FDA for failing to act on petitions.

2022
FDA denies both petitions.

2022
Advocates submit objections and reconsideration request to FDA.
Phthalates on our plates in 2022

9 phthalates remain approved for food-contact use

7 of these cause irreversible harm to the developing fetus

4 of these cause irreversible harm to the developing male reproductive tract

3 of these phthalates are banned from toys because of health hazards
Key issues in legal advocacy to FDA

• When and how must FDA reevaluate the safety of phthalates (and other chemicals) approved decades ago?
• How much evidence of hazard and unsafe exposure is required to revoke approval?
• How broadly must FDA define the relevant class of phthalates, and how must FDA accurately assess cumulative effects?
• What role does exposure to phthalates from non-food sources (e.g., cosmetics and personal care products) play in FDA's safety review?
• How long can this process take?
Opportunities for action

- Ongoing litigation and administrative advocacy before FDA by Earthjustice and partners
- EPA risk evaluations of phthalates under the Toxic Substances Control Act
- State-level bans
- Research and engagement from scientific community
We are using the power of the law to protect human health and advance environmental justice.

Scan to learn more about the TOXIC EXPOSURE & HEALTH PROGRAM
Questions?