

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

Presentation by

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Because the Earth needs a good lawyer.

Photo Credit: Subhankar Banerjee



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Climate & Energy



Preserving the Wild



Healthy Communities

Toxic Exposure & 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



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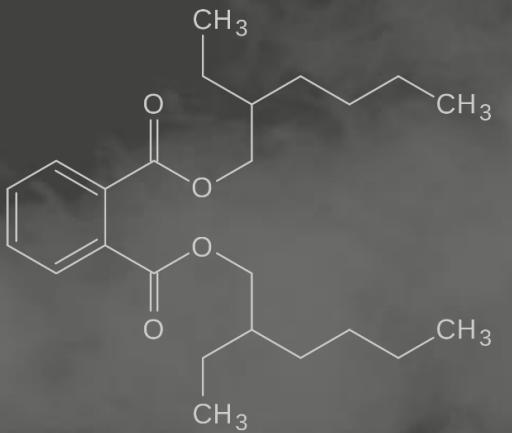
Kelly Lester
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Phthalates are ubiquitous pollutants

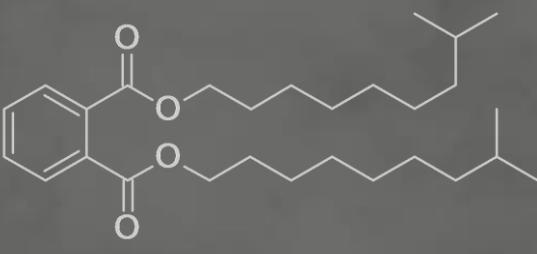
- Ortho-phthalate esters
- Added to plastics to make more flexible and durable, found in high quantities in PVC (polyvinylchloride)
- Endocrine disruption, male reproductive malformations, neurodevelopmental harm, infertility
- Widely found in **food packaging materials, medical devices, children's toys,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



BBP



DEHP



DIDP



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

Lowered IQ

Miscarriage

Behavioral disorders

Learning disabilities

Low sperm counts

Infertility



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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 highest chemical contamination on Earth



Vi Waghiyi, 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.

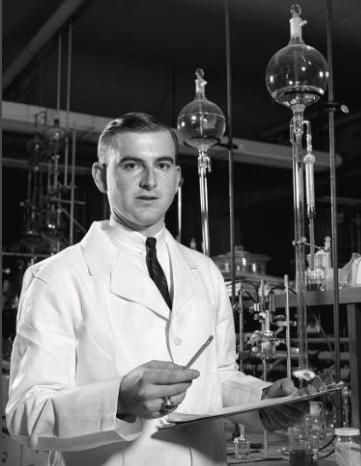
FDA has a legal duty to ensure the safety of all food additives, which includes chemicals used in food-contact materials that are known or expected to migrate into food.

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**.



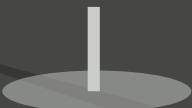
8 of the phthalates approved for food-contact use already banned from toys because of health hazards.



Holding FDA accountable

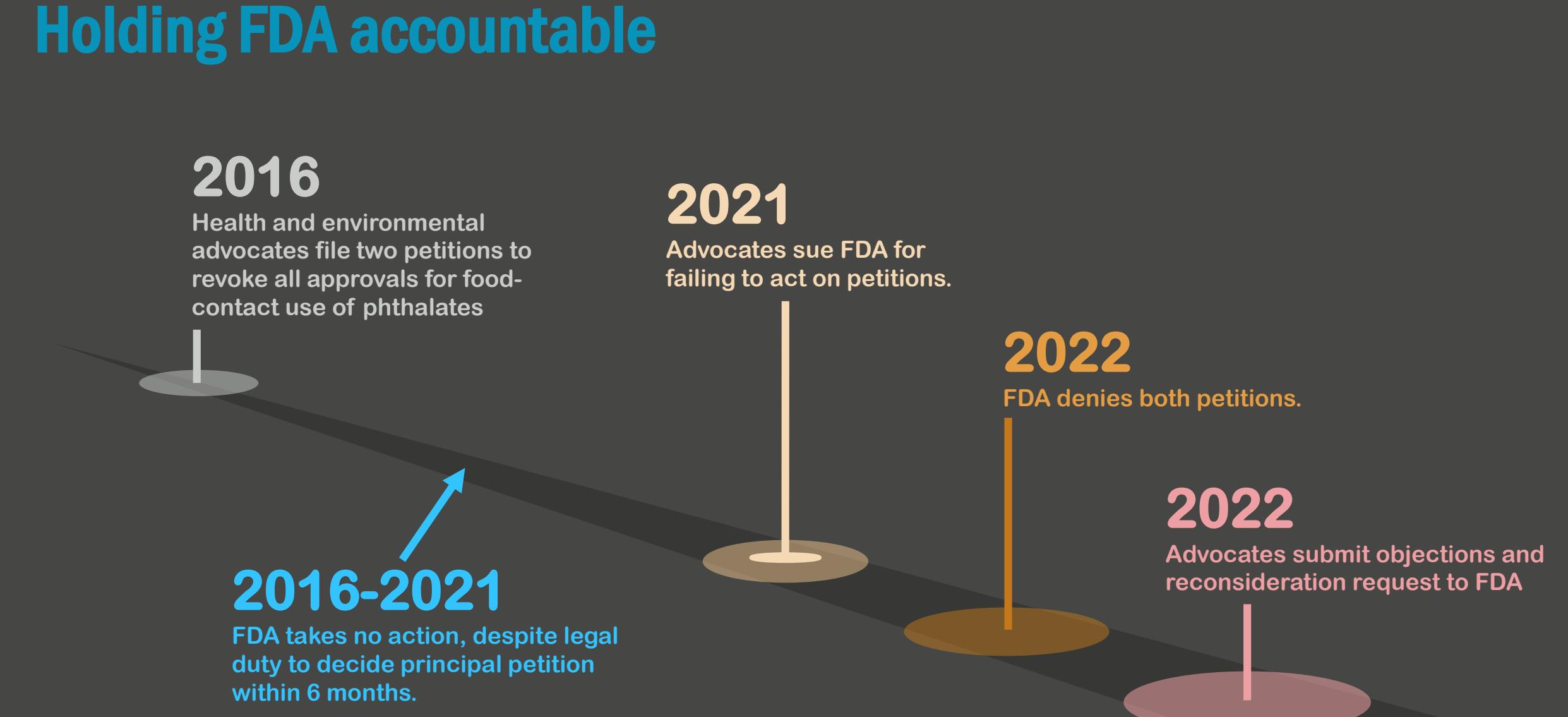
2016

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.



Phthalates on our plates in 2022

9 phthalates remain approved for food-contact use

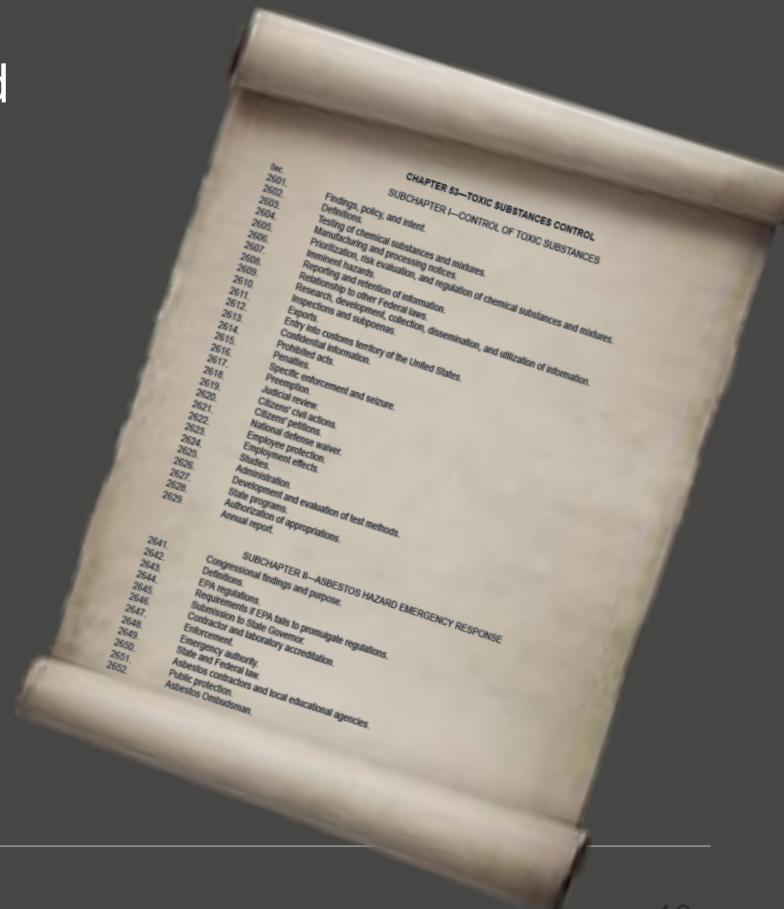
7 of these cause irreversible harm to the developing fetus

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
- Open public docket to submit information on phthalate exposure and hazards to FDA through December 27: <https://www.regulations.gov/document/FDA-2022-N-0571-0001>
- 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.



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TOXIC EXPOSURE & HEALTH PROGRAM



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An aerial photograph of a coastal wetland area. The scene features several narrow, winding waterways with dark blue water, which are partially enclosed by light brown, sandy or muddy banks. These banks form a complex network of inlets and small islands. In the background, the water extends to a distant horizon under a clear, pale blue sky.

Questions?