

# Bright Cities 101



# What is the Bright Cities Program?

**Bright Cities provides grants of up to \$35,000 to city governments and community-based partners to equitably reduce their community's exposures to neurotoxic chemicals that interfere with all babies' brain development.**

A Bright City works to lessen the harm of neurotoxic chemicals in ways that are tailored for each community.

Benefits to being a Bright City extend beyond reducing neurotoxic exposures: it provides an opportunity to leverage national funding and set the stage for sustainable equitable change. And it provides a fresh opportunity for cities to ensure that all babies have equitable, just, and healthy environments.



Our children deserve to live in safe and vibrant communities that allow them to thrive. By partnering with Healthy Babies Bright Futures, we are ensuring that every child in Providence has the opportunity to realize their full potential.”

— Mayor Jorge O. Elorza, Providence RI



# Why is this important?

**1 in 6 children in America have a neurological disability** including autism, IQ loss, learning or behavioral problems, attention deficit/hyperactivity disorder and speech or cognitive delays. **While toxic chemicals are not the sole cause for lifelong learning and developmental deficits, they are among the most preventable.**

Diverse experts agree that before and after birth exposures to toxic chemicals and pollutants significantly increase kids' risks for neurodevelopmental disorders. These chemicals can interfere with sensitive biological processes during critical developmental periods.

During the first few years of life, **a child develops neural connections at that incredible rate of 1 million per second.** Whether or not these connections thrive or weaken creates what the Harvard University Center on the Developing Child calls “the architecture” of your child's brain—a foundation with lasting effects on each child's future.



# How do neurotoxins reach babies?

**Arsenic.** Arsenic widely contaminates food, drinking water, parks and backyards. For children ages 0 to 2, three foods account for ~68% of total daily exposures: infant rice cereal, apple juice, and rice.

**Flame retardants.** Manufacturers have added flame retardants to a broad swath of consumer and industrial products for decades, including furniture foam, electronics, carpet, and building insulation.

**Lead.** Lead has been removed from paint and restricted in children's toys, but current levels of exposure are linked to the loss of 23 million total IQ points among children under 5. Survey results from Bright City Jackson, MS, found that 33% of mothers and guardians are not aware of how to protect their children from lead.





# How do neurotoxins reach babies?

**Mercury.** Mercury is a global pollutant released from coal-fired power plants, mining operations, and other sources. Exposures during pregnancy are the chief concern.

**Organophosphate pesticides (OPs).** Infants, toddlers, and women get more than half of their total daily OP exposure from pesticide residues on fruits and vegetables. OPs in the air make up about  $\frac{1}{5}$  of total exposures, regardless of age.

**There are four other neurotoxins that can also affect babies: PAHs or polycyclic aromatic hydrocarbons, perchlorate, PCBs or polychlorinated biphenyls, and phthalates.**

These and other neurotoxic exposures are nearly ubiquitous in our environment, but targeted steps can significantly reduce exposures.



# What babies are impacted?

All babies are impacted by neurotoxins in their everyday environments, but **babies of color are disproportionately affected.**

In a review of 68 studies published from 2007 to 2019 that included the outcomes of almost 33 million births in the United States, 29 studies examined the link between pollution and low birth weight, a risk factor for lower IQ and other adverse neurological impacts, and 13 looked for association with racial/ethnic disparities.

**Ten of the 13 studies found black mothers were at higher risk (77%),** four of the 13 (31%) showed a higher risk of low birth weight among Asian mothers because of pollution, and three (23%) of the studies found a greater risk of low birth weight babies caused by air pollution in Hispanic pregnant women.

At-risk populations live in nearly every city in America, and Bright Cities committed to being even **more** explicit about the systemic racism that impacts the issues we are working on to more intentionally reduce risk for babies of color and their families.



# Where can our city reduce neurotoxins?

- **Sustainability/resilience/climate plans**, e.g., green infrastructure projects, including tree planting, vegetative barriers, and chemical-free turf maintenance.
- **Public housing and spaces**, e.g., toxic-free childcare training and nap mat exchanges; organic and lead-safe gardens; and reducing lead exposures through education and/or remediation projects.
- **City purchasing**, e.g., environmentally preferable purchasing policies that require products purchased are sustainable and free of neurotoxic chemicals.
- **Food**, e.g., using municipal land for organic produce cultivation, increasing availability of local/organic produce; working collaboratively with residents in low access food areas to develop solutions to the lack of healthy food access.
- **Outdoor air**, e.g., planting of trees and/or vegetative barriers near busy streets to reduce pollutants; transitioning park management strategies to chemical-free methods, and other green infrastructure projects.





# Impacts of Bright Cities



- 5,000+ children impacted by 2020 Bright Cities programs
- 27 Bright Cities have taken steps to reduce neurotoxins
- 16 states represented
- 7 completed projects, including four focused on green infrastructure
- 16 projects ongoing



The City of Missoula works hard to intentionally infuse healthy outcomes into our policies, programs, and services. Our Bright Cities partnership allows us to act on those principles, and the result is healthy kids, families and communities.”

— Mayor John Engen, Missoula, MT



# Where have Bright Cities reduced neurotoxins?

- **Water Pollution:** Jackson, MS, found that 33% of mothers and guardians didn't know how to protect their children from lead. City staff held trainings at childcare centers and held community events to talk about water filters to remove lead from water and dusting/vacuuming/re-painting to reduce lead paint ingestion. Denver's water utility built relationships with childcare providers to prioritize lead service line replacement at childcare locations.
- **Air Pollution:** 35% of our cities are taking to improve outdoor air quality. Their actions including tree and vegetation planting and transitioning park management strategies to chemical-free methods. For example, Tempe and Phoenix, AZ, planted vegetative barriers to reduce air toxics and are measuring the impact that those hedges have in reducing air pollution. Boulder, CO; Missoula, MT; Providence, RI; and Salt Lake City, UT, are all transitioning to chemical-free turf maintenance.
- **Affordable Housing Communities:** Cities like Boulder, CO, have focused on chemical-free turf maintenance on affordable housing properties. More than 250 children live in the three communities that are moving towards chemical-free turf, and thousands more will be impacted when all 35 communities have safer alternatives to lawn management.

# Where have Bright Cities reduced neurotoxins?

- **Food Sources.** Two cities – Champaign, IL and Salem, MA – created expanded Food Markets to provide support to expectant mothers and babies from low-income families, as well as donating local and organic produce.

Since September 2020, Champaign's Mobile Food Market has distributed more than 5,000 pounds of organic, locally grown produce, organic baby food, diapers, and formula – free of charge – to more than 1,000 community members.

- **Everyday items.** The San Francisco Department of the Environment and Department of Public Health are replacing flame retardant-containing nap mats with nap mats free of flame retardants for child care providers serving low-income households.



We loved getting veggies with the kids at the Mack Park Farmers Market this summer. My neighbors and I were impressed! I'm happy Mayor Driscoll supported this program: providing free, organically-grown produce in a beautiful park really helps nurture our community!"

– Claudia Paraschiv, Salem, MA, resident & mother of a toddler and newborn



# What resources are available?

You can learn more about Bright Cities' work here:

- [Webinar Series: Equitable Neurotoxic Chemical Reduction Into City Planning](#)
- [Boulder, CO's Organic Turf Guide](#)
- [Anchorage, AK Case Study: Anchorage's Toxic-Free Trainings and Nap Mat Exchanges Make Childcare Centers Healthier](#)
- [Columbia, SC Case Study: How Columbia's Three-Part Sustainability Strategy Protects Babies' Brain Development](#)
- [Missoula, MT Case Study: Missoula Creates Healthier Turf and Cleaner Air for Toddlers](#)
- [Salt Lake City, UT Case Study: Salt Lake City Works Towards Pesticide-Free to Make Parks and Homes Safer](#)
- [HBBF's Blog](#)
- [Rolling application for Bright Cities](#)





# How can my city get involved?

For more information about becoming a Bright City, contact:

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