



## An alliance to reduce exposure to toxic chemicals during the first 1,000 days of development

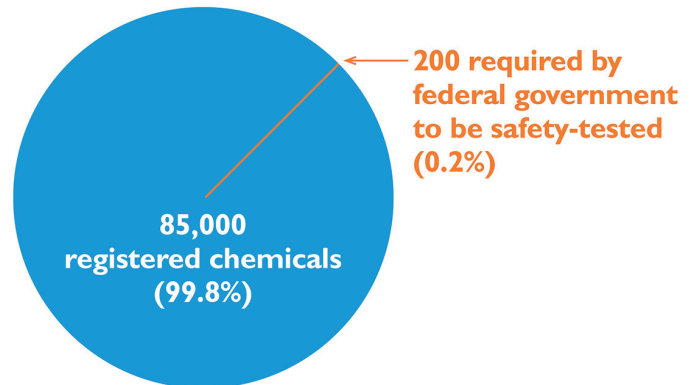
### A Silent Epidemic



We are all vulnerable to the health impacts of untested and unregulated chemicals in our air, water, food and products we use every day. In fact, the exposure to toxic chemicals is so prevalent and the impacts on brain development so widespread and severe that leading doctors and scientists call it a “silent epidemic”.

### Babies Are In Harm’s Way

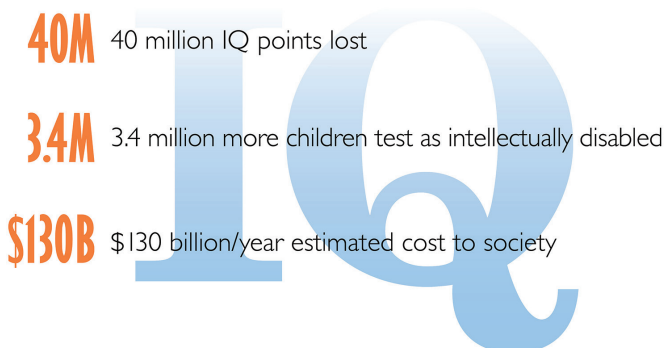
While brains are forming and growing rapidly during the first 1,000 days, they are being harmed by toxic “brain drain” chemicals all around them. This harm includes autism, IQ loss, learning problems, behavioral problems, attention deficit/hyperactivity disorder, and speech or cognitive delays. A large and growing body of research indicates that early life exposures to toxic chemicals—ubiquitous in our air, water, food, and everyday products—can contribute to these health and developmental problems.



### Science Links Exposure and Impact

The “brain drain” chemicals – including lead, mercury, toxic flame retardants, arsenic and components of plastics, pesticides and air pollution - are part of the reason that 1 in 6 children in the United States has been diagnosed with a developmental disability and why 10 times more American children were considered autistic in 2010 than in 1997. While we do not know all the factors that cause these health impacts, we do know that more exposures to neurotoxic or “brain drain” chemicals mean higher incidences of ADHD, behavioral problems, cognitive delays, and low birth weight.

And when there are fewer exposures to brain drain chemicals during the first 1,000 days of development, IQs are higher. Studies also show that disproportionately more exposures to these chemicals are one important reason why children below the poverty line are more likely to have intellectual disabilities.



## Ensuring that Future Generations Have the Brain Power to Learn, Achieve and Prosper

**Healthy Babies Bright Futures** (HBBF) is a new alliance of nonprofit organizations, scientists and charitable foundations that is designing and implementing three core programs to reduce babies' exposures to toxic chemicals in the first 1,000 days of development. The **Bright Choices** program is driving reductions in the use of toxic flame retardant chemicals in American homes and offices and expanding its focus to help families reduce their exposures to all toxic chemicals when buying and using consumer products and food. **Bright Cities** is beginning to work with municipalities to adopt policy and program changes that will reduce their residents' exposures to brain drain chemicals. HBBF's **Science Into Action Plan** (SnAP) is focusing on the production of accurate, accessible and actionable summations of the science. The performance of all three HBBF programs will be measured using a common metric: pregnant women and babies' reduced exposures to toxic chemicals.

### Healthy Babies Bright Futures Will Make a Significant Difference

HBBF designs and implements projects that reduce babies' exposures to toxic chemicals during the most vulnerable and significant periods of development: in utero and from birth to age two. HBBF projects:

- Apply emerging science and technology to accelerate change;
- Prioritize interventions that data suggests will have the greatest results;
- Ensure that the most vulnerable babies are protected;
- Facilitate collaboration among the most effective actors in the field;
- Bring new allies to efforts to protect babies' health;
- Track and analyze program outcomes; and
- Illustrate the return on investment in protecting babies and children from neurotoxic chemicals.

### Advisory Board

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## Strategies for Success

Concentrate on where the science is strongest, deliver outcomes that can be measured, put solutions into the hands of the people most directly affected, harness the power and vitality of cities to solve problems and demonstrate the economic benefits of early interventions to protect health.

## Healthy Babies Bright Futures Programs

Healthy Babies Bright Futures presently comprises three programs. Bright Choices, Bright Cities and Science Into Action. Each of these programs will be supported by centralized strategy, communications and evaluation services.



Bright Choices



Bright Cities

Science into Action



### Bright Choices

The Bright Choices program drives policy and corporate change by creating alliances that develop common strategies, communications and goals to achieve measurable reductions in neurotoxic chemical exposures.

The first Bright Choice campaign is reducing the use of toxic flame retardants in furniture and children's products – two important exposure sources for pregnant women and children. The campaign, for the first time, brought the key groups working to reduce exposures together to create shared goals, an ambitious coordinated campaign strategy and a central funding pool. This led the 26 groups to better leverage relationships and strategy to accelerate momentum for changes on store shelves. We have proof the strategy is effective as the nation's top furniture retailer Ashley Furniture as well as more than 61 other furniture brands have banned toxic flame retardants from their product lines. It also impacted the children's product market as over 95% of the nap mats on the market are now toxic flame retardant free

The Healthy Babies Bright Futures coordination and communications team works closely with campaign partners to develop messages, shared materials, an alliance with fire fighters and a common communications calendar. The first message testing survey was completed in June and reviewed during two webinars in July and August with more than 120 participants.

The value of working more collaboratively has inspired campaign partners to expand into other toxic flame retardants markets, including insulation, electronics and textiles, to further reduce babies' exposures in homes and workplaces. The campaign is also exploring "end-of-life" issues where recycled plastics contaminated with toxic flame retardants end up in spatulas and other products used to prepare food.

The findings of HBBF's Science Into Action researchers will determine additional Bright Choices campaigns to eliminate neurotoxic chemicals from babies' food and other products.

## Bright Cities

Bright Cities, to be launched in Fall 2015, will provide selected cities with staff, technical assistance, financial support, and policy and programmatic tools to reduce sources of, and exposures to brain drain chemicals in their communities. Bright Cities action areas will include:



- Water
- Housing and indoor air quality
- Construction
- Medical screenings
- Outdoor air quality
- Building codes
- Institutional purchasing
- Food
- Child care regulations
- Parks and playgrounds

Bright Cities will measure and document results in each city using a cost/benefit analyses formula that HBBF is now developing with independent economists. Bright Cities will then help publicize the success stories, promoting the idea of participating cities as good places to raise healthy children as well as centers of innovation.



## Science into Action Plan

Healthy Babies Bright Futures Science into Action Plan (SnAP) confronts the disconnect between the growing body of scientific information about the impacts of chemicals on human health and how it can be applied for real world benefit. The two greatest needs in bridging that divide are:

1. Making the science accessible, relevant and actionable to city and state leaders, businesses, communities and families; and
2. Filling the critical knowledge gaps in scientific understanding of how chemicals affect the developing brain, so that new information can better guide program interventions.



## **In 2016, Healthy Babies Bright Futures SnAP researchers will:**

- Conduct the additional research needed to develop a set of specific actions that families can take to reduce their babies' exposures.
- Develop and implement strategies for reaching low-income families (mostly mothers) with the information.
- Develop and implement measurement methodologies to evaluate the impact of the communications and outreach.
- Harness technological innovation in the service of finding solutions to the intractable problem of “down market dumping” where consumer products containing hazardous chemicals are either discarded in landfills near low-income communities or sold to unsuspecting low-income people as more affluent customers eliminate them.

To continue to advance the frontier of knowledge in this field, SnAP will promote the funding of a strategic scientific collaboration with New York's Mt. Sinai School of Medicine, Columbia University, the University of California, San Francisco and other academic research institutions.

Bright Choices, Bright Cities and SnAP are connected through a central Healthy Babies Bright Futures coordination and communications hub. HBBF is fiscally sponsored by the New Venture Fund and is structured as an alliance with a 15-person board of advisors made up of representatives of nonprofit organizations, charitable foundations and the scientific community.

## **Measuring Outcomes**

Central to the mission and vision of Healthy Babies Bright Futures is the importance of measuring outcomes and of having evaluation inform program development in a way that benefits all members. Long term studies of groups of women and their children in New York City, Northern California, Boston and elsewhere offer a model for measuring outcomes as chemicals are withdrawn from products and babies' environments through market shifts or policy reforms. Innovations in wearable monitoring devices such as wristbands may be used to gauge reduced chemical exposures in real time.

### **These tools and technologies will enable us to measure all outcomes based on three metrics:**

- 1.** The number of babies and pregnant women who are affected (scale)
- 2.** Declines in body burdens of target chemicals (impact)
- 3.** The cost of achieving those reductions and the financial, health and IQ benefits that are the result (efficacy)

Every aspect of Bright Choices, Bright Cities and Science in Action will be designed and evaluated based on those metrics. Continuous performance measurement will enable us to modify and improve programs as they operate in the field.

There is also the matter of metrics in the short, intermediate and long-term. The measurement tools described above will yield information within a year or two of program inception. If funding is sufficient, we would be able to see impacts at three, five and ten-year marks such as scores on standard intelligence and developmental milestones testing and then in school performance, job readiness and other indicators of preparation for successful adult lives.

## Integrated Communications for Greater Impact

Healthy Babies Bright Futures is investing in top-flight communications capacity and will integrate it fully into all program activities. Our communications activities will:

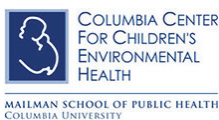
- Raise the general level of awareness about the need to protect babies and children beginning at the earliest life stages.
- Provide a tool for families and cities to reduce toxic chemical exposures via an interactive website.
- Showcase the progress that cities make in protecting the health of their youngest and most vulnerable residents.
- Recognize and further incentivize cities for their leadership in creating healthy communities.
- Provide tools for Bright Cities to share innovations and for new cities that want to join them.
- Translate emerging science about health impacts related to toxic chemicals so that it is accessible and meaningful to non-scientists.

## Please Join Us

For more information or to find out how you or your organization can help support our work, please contact us at [info@hbbf.org](mailto:info@hbbf.org) or visit us at [www.hbbf.org](http://www.hbbf.org).



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