

# Executive Summary

## All fluorescent lamps<sup>1</sup> contain mercury, a neurotoxin that can cause harmful and long-term health effects. This report outlines the health risks and environmental impacts of fluorescent lighting, highlights the many compelling advantages of transitioning to mercury-free alternatives, and gives actionable solutions to phase out mercury-added lamps in the United States. The findings and recommendations are synthesized in the following key points:

Mercury is a chemical of major public health concern, yet is still used in all fluorescent lighting.

Fluorescent lamps release mercury whenever they are broken. Because fluorescent lighting is ubiquitous, lamp breakage can occur in homes, schools, child care settings, office and apartment buildings, retail stores, factories, health care and other facilities.

There is no “safe” level of exposure to mercury. When a fluorescent lamp breaks, the clean-up recommendations detailed by the US Environmental Protection Agency (EPA) are ‘above and beyond’ what most people are aware of and prepared to do. This includes immediate evacuation, ventilating the room for several hours, shutting off central heating and cooling to avoid mercury dispersion, collecting all contaminated materials (clothing, protective gloves, rugs) in a sealed plastic container, and following their local government’s disposal recommendations.<sup>2</sup>

Those most at risk include:

- **Infants and toddlers**, who are likely to be most exposed to mercury vapor when a lamp breaks, especially in an unventilated space. Uptake of mercury vapor in early life not only results in a higher relative dose than in adults, but also increases the risk of developmental disabilities.
- **Workers**, who handle fluorescent lamps at manufacturing and recycling facilities as well as maintenance workers in commercial and institutional buildings (e.g., offices, schools, hotels, hospitals, and apartment buildings). In many cases, workers are unlikely to be informed about the risks and the appropriate measures to reduce exposure.
- **Communities of color and people living in low-income neighborhoods**, who may be chronically exposed to a combination of toxic substances, including mercury. Such multiple toxic chemical exposures can erode health overtime and result in higher levels of illness over time, especially in communities with lower access to medical support.

In the past, fluorescent lamps were promoted as an energy-efficient alternative to incandescent and halogen lamps, and the risks associated with mercury in fluorescents were tolerated as a necessary trade-off. Today, thanks to major advances in light-emitting diode (LED) technology, mercury-free LED lamps can cost-effectively replace fluorescents in virtually all applications. In addition, LEDs last longer than fluorescent lamps, and due to their lower energy consumption, their use results in less mercury and other harmful air pollutants released from coal-burning power plants.

Several health and environmental organizations partnered on the release of this report to highlight the risks posed by mercury in fluorescent lamps and recommend the following immediate actions:

- **The Biden Administration** should support an international phase-out of all general-purpose fluorescent lamps by 2025 at the upcoming Fourth Meeting of the Conference of the Parties (COP4) of the Minamata Convention on Mercury. This would support a proposal submitted to COP4 by the African Parties to the Convention.
- **The federal government** can phase out the manufacture and sale of fluorescent lamps in the United States by 2025. To accomplish this, the Biden Administration can work with:
  - Congress to strengthen federal lighting-efficiency policies and direct the **US Department of Energy** to conduct a new regulatory analysis of fluorescent lighting, including replacing the statutory category and definition of “general service fluorescent lamp” with a category and definition that would encompass both fluorescent and LED retrofit lamps, thereby enabling DOE to consider the cost effectiveness of mercury-free LED options in the regulation.

<sup>1</sup> In order to avoid confusion, this report uses the term “lamp” instead of “bulb,” “light” or “light bulb” to identify any individual light source. Light fixtures or luminaires may contain more than one lamp or light source.

<sup>2</sup> See more detailed guidance in Appendix 1.

