

THE GLOBAL BURDEN OF DISEASE FROM LEAD POLLUTION

A CALL TO ACTION

DEATHS DUE TO LEAD POISONING

**1 IN 3
CHILDREN IS
POISONED
BY LEAD**



- Approximately one third of the world's children are lead poisoned—**as many as 800 million globally**¹—at or above the WHO threshold and US CDC action level of 5 µg/dL.²
- In 2019, **at least 900,000 premature deaths globally**, or 1.6% of all deaths, were attributable to lead poisoning—a similar number to deaths caused by HIV/AIDs.³
- **92%** of the deaths attributable to lead exposures occurred in **low- and middle-income countries**.⁴
- The global death rate attributable to lead exposures has **increased by 21% since 1990**—rising steadily even after most countries phased lead out of gasoline.⁵

NEGATIVE HEALTH IMPACTS OF LEAD POISONING

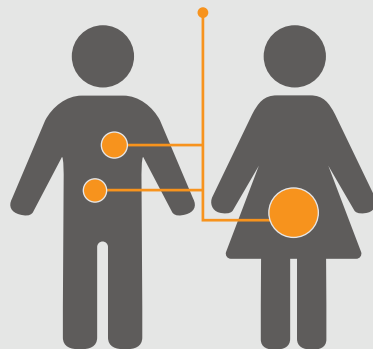
CHILDREN

Decreased intelligence
Behavioral difficulties
Learning problems



ADULTS

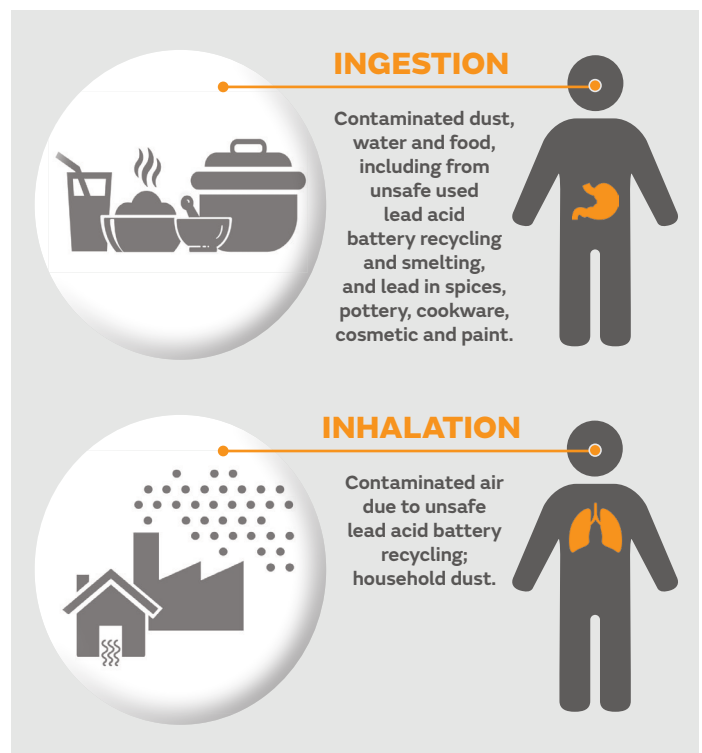
Cardiovascular disease
Liver/kidney disease
Pregnancy complications



- There is **no safe level** of lead exposure.⁶
- High levels of lead exposure in pregnancy **can cause miscarriage, stillbirth, premature birth and low birth weight**.⁷

- **Children are particularly vulnerable** to lead poisoning due to their smaller size and higher rates of lead absorption.⁸
- Blood lead concentrations as low as 5 µg/dL are associated with **decreased intelligence** in children, **behavioral difficulties**, and **learning problems**.⁹
- Lead exposure in young children is also associated with **juvenile delinquency, violence and crime** later in life.¹⁰
- Even low levels of childhood lead exposure are associated with increased risk of death from **cardiovascular, liver and kidney disease** later in life.¹¹

SOURCES OF LEAD POISONING AND EXPOSURE PATHWAYS



- **Informal used lead-acid battery recycling** is a major source of lead poisoning globally.¹² 85% of the lead used today goes into lead acid batteries, and most of those batteries are made and sold in low- and middle-income countries.¹³
- Contaminated **cookware, pottery, spices** and **cosmetics** are also significant sources of lead poisoning.¹⁴

ECONOMIC COSTS

According to 2020 analysis by the World Bank, childhood lead exposure is estimated to cost lower- and middle-income countries almost **USD \$1 TRILLION IN LOST ECONOMIC POTENTIAL**.¹⁵

In many countries, economic losses from lead exposure **EXCEED THE TOTAL VALUE OF DEVELOPMENT AID** to that country.¹⁶

SOLUTIONS EXIST AND ARE COST-EFFECTIVE

- The economic benefits of reducing childhood lead exposure in the USA alone is estimated between \$110 billion and \$319 billion annually.¹⁷
 - Decreases in blood levels have been linked to significant reductions in crime rates.¹⁸
 - Soil remediation is cost-effective and provides excellent return on investment.¹⁹
- Set up monitoring and reporting systems, including blood lead level testing.
 - Implement prevention and control measures, including preventing children's exposure to high-risk sites, remediating contaminated sites and removing lead from products
 - Strengthening health systems so that they are equipped to detect, monitor and treat lead exposure among children;
 - Conduct public awareness education and behavior change campaigns about the dangers and sources of lead exposure with direct appeals to parents, schools, community leaders and healthcare workers.
 - Develop, implement and enforce environmental, health and safety standards for manufacturing and recycling of lead acid batteries and e-waste, and enforce environmental and air-quality regulations for smelting operations.
 - Create global metrics to verify results of pollution interventions on public health, the environment and local economies; build an international registry of blood lead level studies; and update international standards and norms around recycling and transportation of used lead acid batteries.

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