

EXPOSURE TO LEAD FROM PAINT ERODES INDIAN CHILDREN'S ABILITY TO LEARN

Children and nations grow and prosper with greater educational opportunities. But when children cannot learn, those opportunities are wasted.

It is now well documented that extremely low levels of lead in children's blood interferes with brain development and causes learning deficits and brain disorders such as attention deficit disorder and other mental disabilities.¹

The World Health Organization (WHO) and the United Nations Environment Programme (UNEP) are spearheading an international call to eliminate lead from paint together with over 40 partners around the world.²

Lead's Impact is Lifelong and Irreversible

Children's intelligence, as measured by IQ scores and school performance, is reduced by exposure to lead. Levels as low as 5 micrograms/deciliter ($\mu\text{g}/\text{dl}$) have been attributed to decreased learning ability and behavioral problems. The impact is permanent. Children who are exposed to lead and other toxins simply won't have the same peak cognitive ability as children with lower exposure.³

The World Health Organization Says No Safe Level of Lead Exposure has been Identified

Lead in paint is one of the largest remaining sources of exposure to lead, and paint containing lead can remain a continuing source of exposure and lead poisoning for many years after the paint has been applied.⁴ Of particular concern is its use in the home, in schools in playgrounds and other places children, live, study and play.

Lead Paint is Still Commonly Manufactured, Sold, and Used in India and is an Ongoing Source of Lead Exposure in Children

Lead in paint contributes to a downward shift in aggregate intelligence in India's children and means that a larger proportion of India's school children will have trouble learning and exhibit behavioural problems. It reduces India's intellectual capital, robbing it of future leaders and problem solvers. And it creates higher societal costs for special learning programs and for coping with behavioural problems.

Lead Blood Levels in India are High

WHO estimates that 74% of children in South-East Asia have blood lead levels above 5 $\mu\text{g}/\text{dl}$ with a third of these above 10 $\mu\text{g}/\text{dl}$.⁵ A 2014 study of 300 Delhi school children aged 6 to 10 found that 36 out of 300 had blood levels above 10 $\mu\text{g}/\text{dl}$.⁵ A number of additional studies of school children in India report the significant prevalence of high blood levels even after the prohibition of leaded petrol, and they draw attention to the continued use of lead in paint, including on toys, playground equipment and in homes.



Progress Has Been Made in Eliminating Lead Paint in India, but More Work Needs to be Done

A series of reports released by the Indian NGO, Toxics Link, showed that that paint sold to Indian consumers contained unacceptably high levels of lead. In response, major paint manufacturers began eliminating lead from their paints. Today large paint manufacturers, with 70 percent of market share, have largely eliminated lead from paints sold in India.

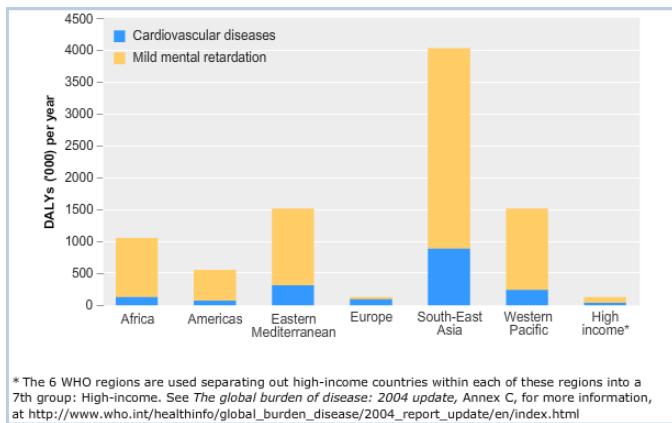
Nevertheless, brands representing 30% of India's paint market still sell paint with unacceptably high levels of lead. Most of these manufacturers are small and medium sized businesses and, in some cases, may need additional technical information, better access to suppliers of non-lead paint ingredients, and other types of help in re-formulating their products.

Rotary Can Help Completely Eliminate Lead in Paint in India

Rotary can play an important role in helping end the production and sale of lead paint in India and in eliminating this risk to human health and intellectual development:

- **Raise awareness** of the hazard to children due to lead paint at the club, district and national levels.
- **Collaborate with the Global Alliance to Eliminate Lead Paint** and sponsor activities to remediate lead paint hazards in local schools or playgrounds.
- **Conduct outreach to local small paint manufacturers** and paint industry trade associations to encourage small manufacturers to voluntarily remove the lead from the paints they produce and sell.
- **Promote a federal lead paint control regulation** that makes the voluntary 90 ppm BIS standard mandatory.
- **Promote or sponsor widespread testing** and surveillance of blood lead levels in Indian children.

SOUTH and EAST ASIA LEADS THE WORLD IN LEAD DISABILITY



* The 6 WHO regions are used separating out high-income countries within each of these regions into a 7th group: High-income. See *The global burden of disease: 2004 update*, Annex C, for more information, at http://www.who.int/healthinfo/global_burden_disease/2004_report_update/en/index.html

Note: Disability Adjusted Life Years (DALYs) is a synthetic measure that combines (1) the years of life lost as a result of premature death and (ii) the years lived with a disease.

Source: World Health Organization

ROTARIANS CAN HELP ELIMINATE LEAD PAINT IN INDIA

Help give Indian children the healthy future they deserve. For more information on how you and your club can contribute to lead paint elimination in India, please contact:

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LEAD POISONING FACTS

- Every year 600,000 new cases of children with mental retardation worldwide can be attributed to lead exposure
- 99% of children affected by high exposure to lead live in low- and moderate-income countries; the greatest numbers of affected children are in South and East Asia
- Lead poisoning can affect virtually every organ system in the body, including the nervous system
- Reducing lead exposure benefits people's health and the economy
- Lead in paint is one of most widespread sources of exposure to lead.
- Lead-based paint can remain a source of lead exposure and lead poisoning for many years after the paint has been applied to surfaces
- Economic cost of lead exposure in Asia: \$700 billion annually

Endnotes

¹The [Global Alliance to Eliminate Lead](#) is a voluntary partnership to focus and catalyze the achievement international goals to prevent children's exposure to lead from paint and to minimize occupational exposures to lead paint. An international week of action is held each year to focus awareness-raising. In 2014, activities took place in 60 cities around the world calling for the elimination of lead paint.

²World Health Organization, *Childhood Lead Poisoning*, page 12. <http://www.who.int/ceh/publications/childhoodpoisoning/en/>

³Dr. Bruce Lanphear, MD<MPH, Simon Fraser University, *Little Things Matter: the impact of toxins on the developing brain, 2014*. <https://www.youtube.com/watch?v=E6KoMabz1Bw&feature=youtu.be>

⁴World Health Organization, *Frequently Asked Questions: International Lead Poisoning Awareness Campaign*, http://www.who.int/ipcs/lead_campaign/faq_lead_poisoning_prevention_campaign_en.pdf?ua=1

⁵<http://apps.who.int/gho/data/node.main.142?lang=en>

⁶Indian J Pediatr. 2013 Aug; 80(8):636-40. doi: 10.1007/s12098-013-0999-6. Epub 2013 Mar 29;



[Toxics Link](#) works together for environmental justice and freedom from toxics. It collects and shares information about the sources and dangers of poisons in our environment and bodies and about clean and sustainable alternatives for India and the rest of the world. Toxics Link has released 4 studies on lead in paint in India; it is a participating organization in [IPEN](#)'s Asian Lead Paint Elimination Campaign; and it advocates for a mandatory 90 ppm lead paint standard in India.



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