

Harmful effects of lead on human health

LEAD is a heavy metal that is toxic for human health that has been used in many applications for thousands of years which include paints, gasoline, cosmetics, stained glass, ammunition, and toys among others, and is also used in commercial spices particularly turmeric and chili powder. Concealed to many, its use in paints goes back as early as to the 4th century BC-- artists and labourers used white lead because of its thickness, density, and opacity. More importantly, people started adding lead to paint because it creates a long-lasting finish as well as accelerates the drying times. In the Roman Empire, unintentional lead poisoning was common because of the use of this metal in pipes, pottery, and food. Researchers have recently documented that exposure to lead in childhood can cause detrimental effects on personality and behaviour, which continues into adulthood.

Like calcium, lead enters the brain and slows down the development of neurons. Even at low levels of exposure, lead has been observed to be associated with antisocial behaviour, lower intelligence quotients (IQ), and reduced emotional attainment. However, little is known about the link between exposure to lead and personality traits outside of the clinical environment. Paint laced with lead lingers in rich countries and is still being manufactured in low-middle income countries (LMIC). Before 1978, lead-based paint has had great demand for its washable and durable characteristics. Endorsement of its use on governmental buildings continued even in the industrialised countries until the mid-1970s; residential use of lead-contained paints was banned in the United States since 1978. Many countries enacted laws limiting the amount of lead in paints, however, at least 76 WHO member states do not have binding controls on its production, import, sale, or use as of 2020.

During International Lead Poisoning Prevention Week (ILLPW) on October 25-31, 2021, Pure Earth led and participated in a range of events to make people aware of the importance of preventing lead poisoning and the ways we can protect our children from exposure to lead. With the counterparts at the UNICEF Bangladesh, Environmental Social Development Organisation (ESDO) and Directorate of Health Services (DGHS), the organisation have been supporting community and national-level efforts in Bangladesh to help mitigate lead poisoning.

There are many worries about lead poisoning. There are still many reasons to make people aware. There is lead presence in paints as observed by recent empirics. In a seminar held on November 4, 2021, ESDO has disclosed that 32 per cent of the

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paints still have unacceptably high concentrations of lead (above 90 ppm). The findings suggest that despite reductions in the concentrations of lead in decorative paintings in Bangladesh, the concentrations remain a high inconsiderable proportion of the products available in the market, although a majority of the paint manufacturers have already installed technology to formulate their products without using lead. The findings highlight the need for reinforcing regulation and close monitoring and control of the production of paints without using lead in Bangladesh and in countries where the use of lead in manufacturing paints continues at present.

Globally, lead paint was banned over 30 years ago, and some signs of progress have also been made in Bangladesh. According to Statutory regulatory (SRO 221-Laws/2018) in Bangladesh lead paint has been banned. Then why does the exposure to lead remain high in this country? In fact, lead from paint, particularly lead-contaminated dust, is one of the most common causes of lead poisoning.

The government and non-government agencies remain committed to preventing lead exposure in Bangladesh. Similarly, communities around the world where the problem exists must also be involved in solving this issue. There are some steps that we can take to tackle the problem. General people are the sufferers and they do not have control. We may increase the awareness but then it would be difficult for people to know which paint is contaminated and which is not. The government should monitor the use of lead and find effective ways for its control. Parents should get their children's blood tested. Teachers need to help educate families. The health community needs to raise awareness of the dangers of lead poisoning. And government leaders around the world can work to establish laws eliminating lead in paint. Working together, we can end lead pollution, and build a world of lead-free children.

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