

Global Perspective of Lead Poisoning And The Current Status In India

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Lead is the major toxic heavy metal globally considered as number one environmental poison and health hazard affecting millions of people in all age groups. Lead has maximum effect during growth and development of children as there is no placental and blood brain barrier. With its deleterious effects on all organs in the human body, lead poisoning is widely recognized as a major public health problem all over the world. Children and women are found most vulnerable to lead poisoning especially in developing countries. Unlike other health hazards, lead poisoning is hundred per cent preventable in certain age group when appropriate legislation is in place. **The estimate by the World Health Organization has indicated that over 120 million people are overexposed to lead all over the world and 99 percent of the most serious cases are in the developing world.** The project Lead Free of The George Foundation was initiated in Bangalore and its vicinity, and subsequently expanded to several other major cities across India), found that more than 51.3 per cent of children in Indian metros below 12 years of age have their blood lead levels above 10 ug/dl. Blood lead levels above 10ug/dl is known to reduce the IQ during growth and developmental phase of children. An average reduction of IQ to an extent of 4-6 units on a scale is known to result in the economic damage to countries to the tune of over Rs 600 crore annually by 2015. Author was involved in the introduction of unleaded gasoline in India in March 2000 as a result of the George Foundation study outcome. Has recently found out other major sources such as lead based traditional medicines and lead-based paints as problems which need immediate attention. Detailed studies by the author has indicated that though the per capita consumption of paints in India is around one-fifteenth of developed countries with a demand as on date with the unprecedented boom in the housing sector which is expected to satisfy the demand for over 30 million new homes which is a great threat to the countries future economy. A study report by the author during 2006 on the analysis of lead in paints in China, India and Malaysia revealed that over 80 new paints from these countries used in homes had very high lead levels exceeding the levels of 1000 ppm. Though there is an urgent need for the ban of lead-based paints all over the world, which has been emphasized time and again to prevent exposure and associated sicknesses, developing countries have not taken this seriously. In India, for example, lead-based paints were found in the homes of three children whose blood lead levels were at least 40 ug/dl. In a report on dust lead levels in Delhi, homes had dust with lead levels of 31 per cent. That incidentally exceeds the current US limit of 40 ug/sq ft. Apart from this almost 80% of all the lead is now used in many parts of the world for the production of lead-acid batteries. In India and other developing countries the environmental friendly recycled lead is of much

lower proportion in lead acid battery manufacturing units causing another major threat to both environment and health. Author was involved in the development of the BEST (Better Environmental Sustainable Targets) certification program to major lead acid battery industry in the country with wide global acceptability. Apart from this small battery industries are also participating in the technology and environmental improvement. With the recent efforts to create lead map of two mega cities in India the National Referral Center for Lead Poisoning in India established by the author with several branches all over the country is conducting lead educator program sponsored by QCI is working towards lead safe society. With Lead-er and LAP and SMILE programs supported by the Quality Council of India countrywide awareness is also being created.