

Lead's long-term legacy: what past exposures can tell us about future disease

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Though harmful lead exposure is still a fact of life in many communities in both developed and developing countries, public health interventions to remove lead from paint, pipes, and gasoline have succeeded in dramatically lowering the global burden of lead on the world's population. Yet, new evidence from long-term observational studies of lead-exposed individuals suggests that, though lead exposures are down, the health consequences of past exposures still linger. Evidence now also suggests that new consequences of historic exposures may emerge in the coming years, as the generation of children with the highest lead burden (those born in the 1950s, 1960s and 1970s) enter old age.

This year marks the 50th anniversary of the peak of the lead pandemic and the 40th anniversary of Herbert Needleman's landmark *New England Journal of Medicine* investigation that reported neuropsychological deficits in children exposed to low levels of lead. In the years since we have learned that no level of lead exposure is safe, for children or adults. As the 31st annual conference of the ISEE seeks to consider the history and future of environmental epidemiology, this symposium would look both backwards and forwards to ask what the lead exposures of the past might foretell for public health and disease in the future.

Humans have been releasing harmful levels of lead into the environment for millennia (long before Hippocrates ever sat to write "On Airs, Waters, Places"). While the short-term consequences of lead exposure are, by now, well known, the long-term consequences remain poorly characterized. This symposium will bring an important historical perspective to the conference and, at the same time, raise awareness of an issue with large implications for public health in the future.