Public Health Association of Australia:  
Policy-at-a-glance – Environmental Lead Exposure Policy

Key message:  
1. There is a need for continuing review of the adequacy of the current blood lead guidelines for all Australians.  
2. A government National Plan for Lead Prevention and Management, with strategies and funding to research, prevent and manage individual and population level exposures of lead, as part of the National Environmental Health Strategy, is an urgent priority.

Summary:  
Exposure to lead in Australia continues to be a preventable public health problem. Developing children are most at risk, and some communities are disproportionately affected. Recent research suggests there may be adverse health effects from lead exposure at blood lead levels even lower than previously recognised. Some countries have moved to reduce guideline levels below those current for all Australians. The NHMRC is reviewing evidence for current recommendations. A nationally coordinated approach is required for improved research, prevention and management of lead exposure in Australia.

Audience:  
Federal, State and Territory Governments, National Health and Medical Research Council (NHMRC), enHealth, and policy makers.

Responsibility:  
PHAA’s Ecology and Environment Special Interest Group (SIG).

Date policy adopted:  
October 2017

Contacts:  
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Environmental Lead Exposure Policy Statement

The Public Health Association of Australia notes that:

1. Lead is a cumulative environmental toxin, with no known benefits of exposure. It can affect multiple body systems, including the neurological, haematological, gastrointestinal, cardiovascular and renal systems. Exposure to lead comes from multiple sources (industry and occupational exposure, lead contaminated paint, dust, soil, water, food, traditional medicines, home renovation and hobbies).

2. Children and the developing foetus are particularly susceptible to the adverse effects of lead exposure. Exposure may impair neurodevelopment, placing them at increased risk for developmental delay, reduced IQ and behavioural problems. Older age groups may also experience health impacts, with a reported association between low BLLs and increased cancer and cardiovascular mortality.

3. In other cases exposure may be a legacy issue from lead in petrol spread by air and deposited near major roads, and in other areas from lead in paint on ageing housing stock exposed due to weathering, poor maintenance or renovation.

4. Children and shooters are also exposed through lead shot.

5. Management of lead exposure is a state and territory government responsibility. However, in communities where excessive lead exposure is long-term and ongoing (e.g. mined or smelted), environmental aspects of lead are considered by the Environmental Health Committee (enHealth), a subcommittee of the Australian Health Protection Committee, which reports to the Australian Health Ministers’ Advisory Council.

6. While household dust remediation may not be effective in lowering BLLs, where there is an extensive legacy of lead exposure through industrial emissions, contaminated land remediation may be effective. However, this is expensive and must be adequately funded and supported at state, territory and federal levels and, where appropriate, by the mining industry. Lead levels may be higher in children from lower socio-economic backgrounds, and appropriate assistance for these families should be provided.

7. The most recent research suggests that there may be adverse health effects from lead exposure at BLLs even lower than previously recognised. The evidence for health effects at levels of at least 10ug/dl (10 micrograms per decilitre) are clear, and there is an association between levels less than 10ug/dl and health effects.

8. The NHMRC (2015) recommends that with the average level in Australians now being less than 5ug/dl, “If a person has a blood lead level greater than 5 micrograms per decilitre, it is recommended that the source of exposure should be investigated and reduced, particularly if the person is a child or pregnant
PHAA Policy Statement on: Environmental Lead Exposure Policy Statement

woman. Individuals should have their blood lead level tested if there is a reason to suspect they have swallowed or breathed lead from a particular source (more than the very small amounts in most people’s environments); or someone in their household has had a blood test that showed a level greater than 5ug/dl; or they have unexplained health problems that could be due to lead”.

The Public Health Association of Australia affirms the following principles:

9. Adequate intervention is required, specifically reducing the sources of childhood lead exposure in low socio-economic environments rather than exclusively identifying those individuals who are over exposed.15

10. Lead toxicity is a potentially avoidable disease, and prevention and management of lead toxicity is a public health priority.8 A health issue exists with industrially generated community lead exposure in towns with long histories of mining and smelting (e.g. Broken Hill, Mt Isa and Port Pirie). Lead is in dust footpaths, housing, yards and play areas, where people living and playing (children particularly) are exposed.6, 7, 9, 10, 12, 16, 17

11. For communities where lead exposure is widespread and long-term, preventive strategies at the community/population level are the most effective way to reduce lead exposure.

12. Health equity principles apply because socio-economically disadvantaged groups may experience poorer health outcomes from lead exposure without adequate intervention, therefore these populations need greater attention.

13. Australian governments at Federal, State and Territory levels, need to adequately support public health programs and research and surveillance activities that aim to reduce individual and population health exposures to lead.

14. Current guidelines and recommendations about diagnosis, prevention and management of lead exposure should be supported by the most up-to-date and credible scientific evidence.

The Public Health Association of Australia believes that the following steps should be undertaken:

15. That Australia establishes a national framework approach to environmental lead management which includes management of legacy issues, good longitudinal population health survey data, a national strategy that encompasses prevention as well as management and incorporates revised action consequent to a reduction of the blood lead reference levels on communities.3, 16, 18

16. That the Resources for Regions funds in relevant states be available for lead affected Local Government Areas (LGAs) to bolster community remediation where recommended.
17. That the NHMRC continue to monitor emerging scientific evidence, and the actions of other
governments internationally to lower BLL guideline values, to ensure current lead guidelines and
protections for Australians are optimised.

18. Funding be provided for education initiatives and research regarding lead shot.

The Public Health Association of Australia resolves to undertake the following actions:

19. Advocate for a National Plan for Lead Prevention and Management with enHealth to include strategies
   and funding to monitor research for prevention and management of existing individual and population
   level exposures of lead in the National Environmental Health Strategy.

20. Advocate for state and territory government resources to deal with lead exposure for families in long-
   term legacy areas of lead exposure.

21. Advocate for continuing review of the adequacy of the current BLL guidelines for all Australians, in
   particular for children and pregnant women, and that the guidelines for occupational exposure for
   workers be consistent with international recommendations.

ADOPTED 2014, REVISED AND RE-ENDORSED IN 2017

First adopted at the 2014 Annual General Meeting of the Public Health Association of Australia. The
latest revision has been undertaken as part of the 2017 policy review process.
References

7. Schrober S. Blood Lead Levels and Death from All Causes, Cardiovascular Disease, and Cancer: Results from the NHANES III Mortality Study. Environmental Health Perspectives. 2006.