

## Environmental lead exposure

### Policy Position Statement

**Key messages:**

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.

Research suggests there may be adverse health effects from lead exposure and 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.

**Key policy positions:**

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 Exposure 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.

**Audience:**

Federal, State and Territory Governments, policymakers and program managers, PHAA members, media.

**Responsibility:**

PHAA Ecology and Environment Special Interest Group

**Contacts:**

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29 October 2020

# Environmental lead exposure

## Policy position statement

### PHAA affirms the following principles:

1. Lead toxicity is a potentially avoidable disease, and prevention and management of lead toxicity is a public health priority.<sup>1</sup>
2. 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.
3. 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.
4. Australian governments at Federal and 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.
5. 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.

### PHAA notes the following evidence:

6. 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 renovations and hobbies).<sup>2,3</sup>
7. 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.<sup>3-7</sup> Older age groups may also experience health impacts, with a reported association between low blood lead levels (BLLs) and increased cancer and cardiovascular mortality.<sup>1,2,8</sup>
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.<sup>2,8-13</sup>
9. In other cases, exposure may be a legacy issues 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.<sup>6,9-11,14</sup>
10. Children and shooters are also exposed through lead shot.<sup>15,16</sup>
11. 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 Principal Committee, which reports to the Australian Health Ministers' Advisory Council.<sup>2</sup>

12. 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.<sup>3, 6, 8, 14</sup>
13. Recent Australian research has confirmed higher BLLs in children in older houses, and from lower income households.<sup>17</sup> 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.<sup>3, 6, 9, 10, 14</sup>
14. Though there is legislation or regulation for occupational exposure gaps in the follow up of workers with high lead levels exist. In particular exposure routes in contractors, site visits to include contractor's usual employer or place of usual employment. Ensuring all workers with high BLLs get a thorough investigation is essential for a healthy workforce and overall reduction of sources of lead exposure. Inconsistent use of available lead control measures has been reported in the literature and lead exposure was not confined to traditional industries.<sup>18</sup>
15. 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.<sup>2, 3</sup>
16. The NHMRC 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 the exposure should be investigated and reduced, particularly if the person is a child or pregnant 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.”<sup>2</sup>
17. Implementing this policy would contribute towards the achievement of [UN Sustainable Development Goals 3 – Good Health and Wellbeing](#).

### PHAA seeks the following actions:

1. Australia should establish 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.<sup>6, 12, 19</sup>
2. Commonwealth funding provided to states and territories – for example the Resources for Regions program – should be available for lead affected Local Government Areas (LGAs) to bolster community remediation where recommended.

3. The NHMRC should 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.
4. Funding should be provided for education initiatives and research regarding lead shot.

### PHAA resolves to:

5. Advocate for the above steps to be taken based on the principles in this position statement.

**First ADOPTED 2014, revised and re-endorsed 2017 and 2020**

### References

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*PHAA Position Statement on environmental lead exposure*

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