

## Lead is an issue beyond childhood (re: Lanphear et al 2018, The Lancet)

A fact sheet by LEAD Group volunteer Emily Choong, using extracts of media articles about the landmark Lancet lead article by Lanphear et al, March 2018

"The population attributable fraction of the concentration of lead in blood for all-cause mortality was 18·0% (95% CI 10·9–26·1), which is equivalent to 412,000 deaths annually [in the US alone]. Respective fractions were 28·7% (15·5–39·5) for cardiovascular disease mortality and 37·4% (23·4–48·6) for ischaemic heart disease mortality, which correspond to 256,000 deaths a year from cardiovascular disease and 185,000 deaths a year from ischaemic heart disease." [Lanphear et al, 2018]

Lanphear and his team reviewed two decades of health data for more than 14,000 adults in the US, covering the period 1990-2011. The participants all had blood tests at the outset to measure past and current exposure to lead, as well as a urine test for the metal cadmium. [Hood, 2018]

"There's no safe threshold," Lanphear said. "Once we found that there was a risk across the entire range of exposures, we could estimate the number of attributable deaths. And instead of it being 40,000 deaths, which is what had previously been estimated, we found that it was about 10 times that." [Lieber, 2018]

'Overall, people who had high lead levels (6.7  $\mu g/dL$ ) were at 37% greater risk of premature death from any cause, 70% times greater risk of cardiovascular death, and double the risk of death from ischemic heart disease, compared with people with lower levels (1  $\mu g/dL$ ). [Lancet, 2018]

They also concluded the estimated number of deaths attributable to lead were



comparable to the number of deaths from tobacco smoke exposure. [Lardieri, 2018]

The new Lancet study estimates that deaths from lead exposure approach the levels attributable to smoking, which kills 483,000 Americans each year. People are still far more likely to suffer complications from smoking. But only 20% of Americans now smoke, while lead exposure is more common, affecting 90% of people in the study. [Glenza, 2018]

## REFERENCES

Glenza J, 2018, 'Lead exposure may be linked to 412,000 premature US deaths yearly, study says', *The Guardian*, Accessed: 1st August 2018 < <a href="https://www.theguardian.com/us-news/2018/mar/12/lead-exposure-premature-deaths-us">https://www.theguardian.com/us-news/2018/mar/12/lead-exposure-premature-deaths-us</a>

Hood M, 2018 'Lead poisoning may hasten death for millions in US: study', *Medical Xpress*, Accessed: 1<sup>st</sup> August 2018 < https://medicalxpress.com/news/2018-03-poisoning-hasten-death-millions.html

Lanphear B, Rauch S, Auinger P, Allen R, Hornung R. 2018 'Low-level lead exposure and mortality in US adults: a population-based cohort study'. *The Lancet Public Health*, Accessed: 1st August 2018

Lardieri A, 2018, 'Study: Lead Exposure Linked to 10 Times More Deaths Than Reported', *US News*, Accessed: 1st August 2018 < <a href="https://www.usnews.com/news/health-care-news/articles/2018-03-13/study-lead-exposure-linked-to-10-times-more-deaths-than-reported">https://www.usnews.com/news/health-care-news/articles/2018-03-13/study-lead-exposure-linked-to-10-times-more-deaths-than-reported</a>>

Lieber M, 2018 'US deaths from lead exposure 10 times higher than thought, study suggests' *CNN*, Accessed: 1st August 2018 < <a href="https://edition.cnn.com/2018/03/12/health/lead-exposure-cardiovascular-disease-study/index.html">https://edition.cnn.com/2018/03/12/health/lead-exposure-cardiovascular-disease-study/index.html</a>>

The Lancet, 2018, 'Historical lead exposure may be linked to 256,000 premature deaths from cardiovascular disease in adults in United States each year.' *ScienceDaily*, Accessed: 1st August 2018 <a href="https://www.sciencedaily.com/releases/2018/03/180312201739.htm">www.sciencedaily.com/releases/2018/03/180312201739.htm</a>