

Information topic	Details
Indicator name	Occupational lead absorption notifications in New Zealand
Domain and topic	Hazardous Substances domain: Lead absorption notifications
Indicator definition and units	The number and rate of occupational lead absorption notifications in New Zealand, where the blood lead level is greater than or equal to 0.48µmol/l.
Data source	The Hazardous Substances Disease and Injury Reporting Tool (HSDIRT).
Numerator	Number of occupational lead absorption notifications.
Denominator	All adults aged 15+ years using the estimated resident population for the corresponding year (StatsNZ 2020) and NZDep 2018 (Atkinson et al 2019).
Methodology	<p>Due to the health effects associated with lead exposure, lead absorption is a notifiable condition if the blood levels are greater than or equal to 0.48µmol/l.</p> <p>GPs or local Public Health Units notify cases of all hazardous substance exposures including lead to the HSDIRT which is administered by Environmental Health Intelligence NZ.</p> <p>Where a person has had a repeat blood lead level taken within 12 months of the original test, the repeat blood test is not included as a second notification unless further investigation or public health action has resulted.</p> <p>Prioritised ethnic group has been used, in the following prioritisation order: Māori, Pacific peoples, Asian, European/Other.</p> <p>Confidence intervals 95% confidence intervals were calculated based on the methodology outlined in APHO (2008). Confidence intervals are presented as error bars on graphs.</p> <p>Interpreting DHB table Please note that when comparing groups of varying population sizes, differences that involve small groups may not be statistically significantly different in comparison with similar differences for larger groups due to a higher variability associated with the rate of the small group.</p>

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Time period and time scale	The HSDIRT was rolled out progressively to all DHBs throughout 2013; therefore 2013 data were not complete. Consequently, occupational lead notifications data were reported from 2014 onwards.
Population coverage	All adults aged 15+ years.
Spatial Coverage	National
Measures of frequency	Results are presented by year, sex, age group, median blood lead levels, ethnic group, occupation, NZDep2018 (Atkinson et al 2019), DHB and PHUs.
Limitations of indicator	Lead absorption is challenging to detect based on symptoms alone as many cases are asymptomatic and will therefore not be seen by a doctor and/or have a blood lead test. In some instances a blood lead test will occur because of awareness of the person's occupation.
Limitations of data source	This data source, only includes cases that were notified and will be underestimating the total burden of disease and injury caused by lead exposures. Also, a case will not be included in the analysis if the GP is unaware of the tool and does not use it to notify cases or the laboratory does not directly notify the blood lead result to EpiSurv.
Created by	Environmental Health Intelligence NZ, Massey University, Wellington.
Related indicators	Hazardous substances notifications in New Zealand Non-occupational lead absorption notifications in New Zealand
For more information	HSDIRT notification tool. https://www.ehinz.ac.nz/our-projects/hazardous-substances/hsdirt-notification-tool/
References	<p>Ahmad, O.B., et al. 2001. <i>Age Standardization of Rates: A New WHO Standard (Technical Report)</i>. GPE Discussion Paper Series: No. 31. Geneva: World Health Organization.</p> <p>Atkinson J, Salmond C, Crampton P. 2019. NZDep2018 Index of Deprivation. Interim Research Report, December 2019. Wellington: Department of Public Health, University of Otago, Wellington. URL: https://www.otago.ac.nz/wellington/otago730394.pdf</p> <p>APHO. 2008. <i>Technical Briefing 3: Commonly used public health statistics and their confidence intervals</i>. York, UK: Association of Public Health Observatories.</p>

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	<p>StatsNZ. 2020. Estimated resident population (2018-based): At 30 June 2018. URL: https://www.stats.govt.nz/information-releases/estimated-resident-population-2018-base-at-30-june-2018#new (Accessed August 2021)</p>
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