

Information topic	Details
Indicator name	Percentage of the population living in mouldy dwellings
Domain and topic	Indoor environment: Damp and mouldy dwellings
Indicator definition and units	Number and percentage of people in New Zealand living in dwellings with visible mould. Mould presence refers to mould larger than A4 sheet of paper (Stats NZ 2023).
Data source	New Zealand Census of Population and Dwellings, Stats NZ
Numerator	Number of people (usually resident populations) living in occupied private dwellings where visible mould larger than A4 sheet paper is present, either sometimes or always.
Denominator	Number of people living in occupied private dwellings with a known mould status (i.e. Total stated). 'Total stated' is the total number of responses excluding any unknowns.
Methodology	<p>The 2023 Census dwelling form asked the following question: <i>Can you see mould in any part of this dwelling that, in total, is larger than an A4 sheet of paper? [Mould (mildew) may grow on the walls, ceiling, floor, doors, window frames, curtains or blinds. Mould can be black, white, green, brown, red, etc.]</i></p> <ul style="list-style-type: none"> - Yes – always - Yes – sometimes - No - Don't know. <p>Percentages for the population living in mouldy dwellings (which are mouldy always or sometimes) have been calculated among the 'total stated' population (ie answering 'yes – always', 'yes – sometimes', or 'no').</p> <p>The 2018 and 2023 Censuses had lower-than-expected response rates, resulting in missing data for some people, households and dwellings. This includes dwellings where the response for the mouldy dwelling variable was “don't know” (unknown).</p> <p>Additionally, this indicator uses the published Census data table about 'people living in mouldy dwellings'. This Census data table gives a 'total population' of 4.57 million people in 2023 (out of about 5 million people usually resident in New Zealand). Therefore, this Census data table excludes about 425,000 people, including people who could not be placed in a dwelling, and people living in non-private occupied dwellings (such as hospitals, residential care units, student hostels and motels).</p>

	<p>To account for some of the missing data, we present the lower and upper logical bounds of what the percentage could be, allowing for the ‘unknowns’ in the Census data table. The lower bound is calculated as the count among the ‘total population’ in the Census data table, and the upper bound is calculated as the sum of the count and unknowns among the ‘total population’. However, these logical bounds do not take into account the 425,000 people not included in the Census data table (some of whom could not be placed in a dwelling), and therefore the logical bounds should be considered indicative only.</p>
Time period and time scale	Census years (2018, 2023). The 2018 Census was the first time this information was collected in the Census.
Population coverage	Results for this indicator are for the usually resident population (people who usually live in and were present in New Zealand on Census night) who were living in occupied private dwellings. The usually resident population excludes overseas visitors and New Zealand residents temporarily overseas.
Spatial Coverage	National, territorial authority, health district (formerly district health board)
Measures of frequency	Percentage of population living in dwellings with visible mould, by age group (including children aged 0–14 years), ethnic group (total response), health district, and territorial authority.
Limitations of indicator	The timing of data collection can affect how people respond to questions on dampness and mould. The early March timing of the Census may reduce reports of dampness and mould and increase responses of ‘Don’t know’ by respondents who have moved recently and have not yet experienced a winter in their current home. Additionally, the extreme weather events and floods of early 2023 (Auckland Anniversary Weekend floods and Cyclone Gabrielle) occurred shortly before the Census was collected (and delayed Census collection in some regions).
Limitations of data source	<p>Dwelling mould is one of the indicators in the dwelling form from the Census. Stats NZ has rated the data quality for this indicator as moderate, due to the lack of alternative data sources and a high level of ‘No information’ responses.</p> <p>The high level of missing data may not provide an accurate picture of dwelling mould for all groups of interest, particularly Māori and Pacific peoples who have poorer access to amenities and higher non-response rate.</p>

	Counts by total response ethnic groups mean totals may add up to more than 100%, as an individual can select more than one ethnicity. This makes direct comparisons between ethnic groups difficult.
Related indicators	<ul style="list-style-type: none"> - People living in damp dwellings - Lower respiratory tract infections hospitalisations (0–4 years) - Asthma prevalence (2–14 years) - Asthma hospitalisations (0–14 years) - Social vulnerability indicators
For more information	Families and households in the 2023 Census: Data sources, methodology, and data quality
References	Stats NZ. 2023. <i>Housing quality index 2023–Census</i> – Stats NZ DataInfo+. URL: Housing quality - 2023 Census: Information by concept