

Second-hand smoke exposure in the home

This factsheet presents statistics on the prevalence of second-hand smoke exposure in the home among children and adults. The data comes from the Tobacco and Electronic Cigarette Use module in the 2015/16 New Zealand Health Survey.

Key facts



Around 29,000 children aged 0–14 years were exposed to second-hand smoke in the home in 2015/16.



Exposure to second-hand smoke for children has decreased considerably from 9.6% in 2006/07 to 3.2% in 2015/16. Second-hand smoke exposure among non-smoking adults has more than halved between 2006/07 (7.7%) and 2015/16 (3.2%).



Children living in the most deprived neighbourhoods (NZDep2013 quintile 5) were 18.1 times as likely to be exposed to second-hand smoke in the home than those in the least deprived areas.



Young people aged 15–24 years, Māori children, and Pacific non-smoking adults had the highest exposure to second-hand smoke.

Second-hand smoke is harmful to health

Second-hand smoke is a major cause of indoor air pollution in New Zealand. Second-hand smoke comes from two places: smoke breathed out by the smoker, and smoke smouldering from the end of the burning cigarette.

Exposure to second-hand smoke causes premature death and illness in both children and adults. In children, second-hand smoke can cause sudden unexpected death in infancy (SUDI), asthma, middle ear infections (otitis media), lower respiratory infections and low birth-weight. In non-smoking adults, exposure to second-hand smoke can cause lung cancer, ischaemic heart disease and stroke (US Department of Health and Human Services 2014, US Surgeon General 2006).

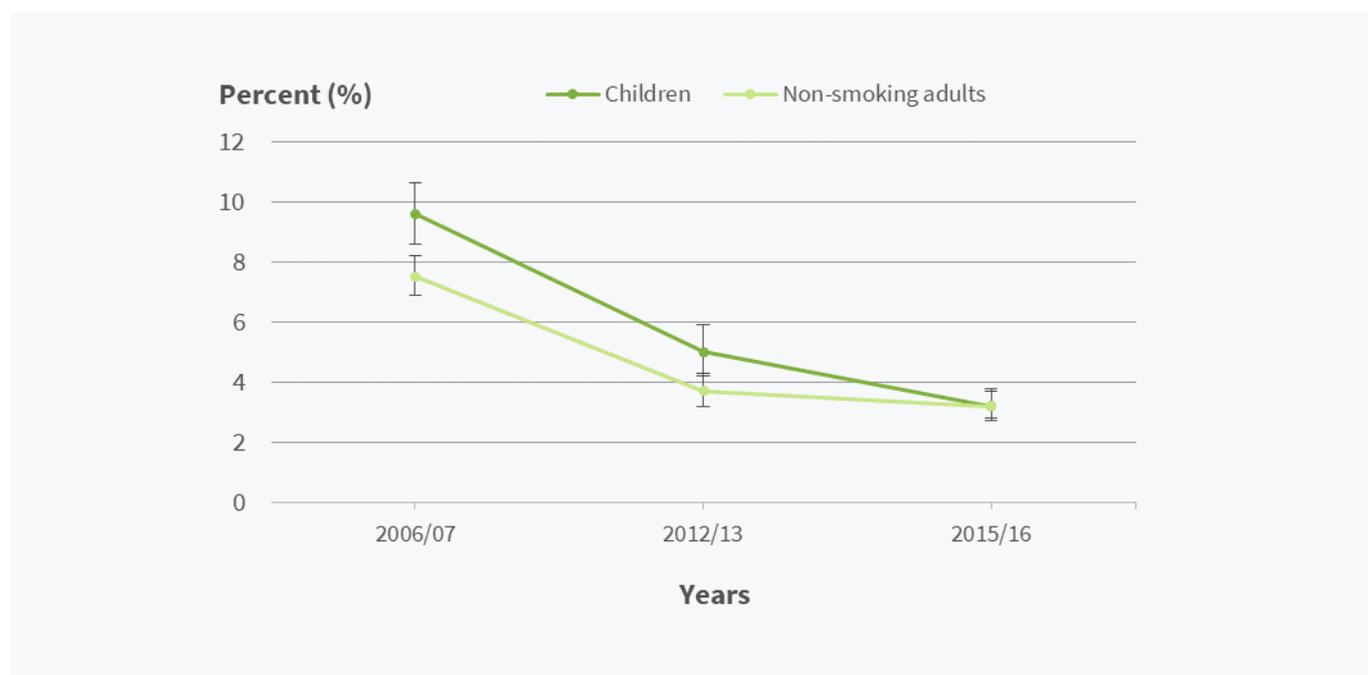
Around 29,000 children aged 0–14 years were exposed to second-hand smoke in their home

In 2015/16, 3.2% of children were exposed to second-hand smoke in the home (95% confidence interval 2.7–3.8). This equates to 29,000 children. A similar prevalence was reported among non-smoking adults aged 15+ years who were exposed to second-hand smoke (3.2%, 2.8–3.7). The estimated number of non-smoking adults exposed to second-hand smoke was not available in the Tobacco and Electronic Cigarette Use module in the 2015/16 New Zealand Health Survey.

Second-hand smoke exposure has fallen in the last nine years

The percentage of children exposed to second-hand smoke has dropped from 9.6% (8.6–10.6) in 2006/07 to 3.2% (2.7–3.8) in 2015/16. For non-smoking adults, the prevalence had more than halved from 7.7% (7.0–8.4) in 2006/07 to 3.2% (2.8–3.7) in 2015/16 (Figure 1).

Figure 1: Exposure to second-hand smoke in the home among children and adults (15+ years), 2006/07, 2012/13, 2015/16



Note: 95% confidence intervals have been presented as error bars.

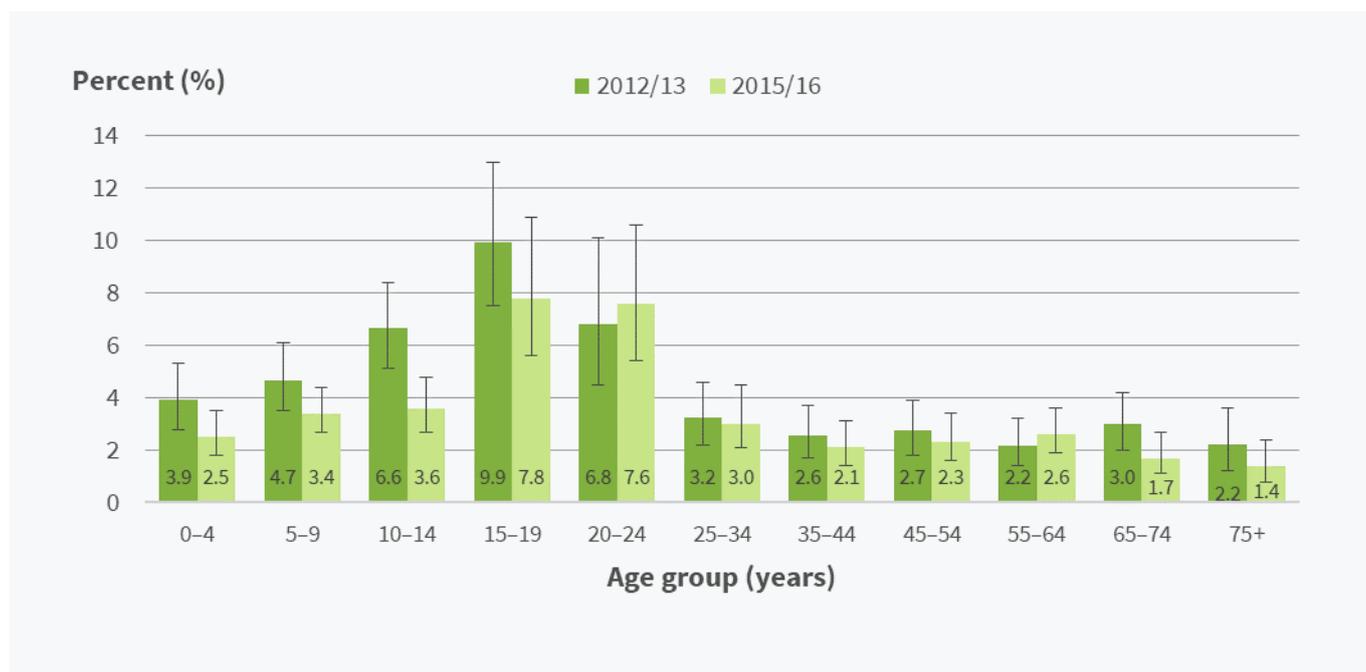
Source: New Zealand Health Survey (Ministry of Health 2020)

Younger non-smokers are the most exposed

In 2015/16, second-hand smoke exposure in the home was higher in younger people 15–19 years (7.8%) and 20–24 years (7.6%), compared with older non-smokers (25–75+ year olds) (Figure 2). A statistically significant decrease in exposure was only seen in the 10–14 year age group from 2012/13 to 2015/16.

In children, second-hand smoke exposure was similar between boys (3.4%, 2.6–4.3) and girls (3.0%, 2.4–3.7). Second-hand smoke exposure rates were also similar between non-smoking adult men (3.4, 2.8–4.3) and women (3.1, 2.5–3.8).

Figure 2: Exposure to second-hand smoke in the home among children aged 0–14 years and non-smoking adults (15+ years), by age group, 2012/13 and 2015/16 (unadjusted prevalence)



Note: 95% confidence intervals have been presented as error bars.

Source: New Zealand Health Survey (Ministry of Health 2020)

Māori children and Pacific non-smoking adults are more likely to be exposed to second-hand smoke

Second-hand smoke exposure in the home was highest in Māori children (6.1%) and Pacific non-smoking adults (8.7%) (Table 1).

Table 1: Exposure to second-hand smoke in the home, by ethnic group, 2015/16 (unadjusted prevalence and estimated number of people)

Ethnic group (total response)	Unadjusted prevalence (%, 95% CI)		Estimated number of people	
	Children	Non-smoking adults	Children	Non-smoking adults
Total	3.2 (2.7–3.8)	3.2 (2.8–3.7)	29,000	N/A
Māori	6.1 (4.9–7.6)	6.3 (5.0–8.0)	14,000	N/A
Pacific	4.9 (3.3–7.3)	8.7 (5.9–12.6)	6,000	N/A
Asian	1.7 (0.9–3.1) ^a	2.9 (2.0–4.3)	2,000	N/A
European/Other	2.3 (1.8–2.9)	2.7 (2.2–3.2)	15,000	N/A

^a This estimate has a relative standard error of $\geq 30\%$ and should be used with caution.

Note 1: 95% confidence intervals (CI) are given in brackets. **Note 2:** Estimated numbers will add to more than the total for ethnic groups due to total response ethnic groups being used (where everyone is included in every ethnic group they report). **Note 3:** The estimated number of non-smoking adults was not available.

Source: New Zealand Health Survey (Ministry of Health 2020)

Māori and Pacific children and non-smoking adults were more likely to be exposed to second-hand smoke than non-Māori and non-Pacific respectively. Adjusting for age and sex differences, Māori children were 2.80 times as likely as non-Māori children to be exposed to second-hand smoke in their home (Table 2). Asian children were less likely to be exposed to second-hand smoke exposure than non-Asian children.

For non-smoking adults, Pacific people were 2.43 times as likely to be exposed to second-hand smoke in their home than non-Pacific.

Table 2: Exposure to second-hand smoke, by ethnic group, 2015/16 (adjusted rate ratio)

Comparison groups for adjusted rate ratio	Adjusted rate ratio (RR, 95% CI) [^]	
	Children	Non-smoking adults
Māori vs non-Māori	2.80 (2.00–3.88)*	1.79 (1.32–2.42)*
Pacific vs non-Pacific	1.69 (1.09–2.61)*	2.43 (1.56–3.78)*
Asian vs non-Asian	0.51 (0.26–0.98)*	0.77 (0.51–1.18)

[^] Rate ratios (RR) are used to compare results for different population subgroups. Adjusted rate ratios are for age and sex differences that could influence the comparison. An adjusted rate ratio above 1.0 shows that the indicator is more likely in the group of interest than in the reference group. An adjusted ratio below 1.0 shows the indicator is less likely in the group of interest than the reference group.

* Indicates a statistically significant result for an adjusted rate ratio greater or lower than 1.0.

Note: 95% confidence intervals (CI) are given in brackets.

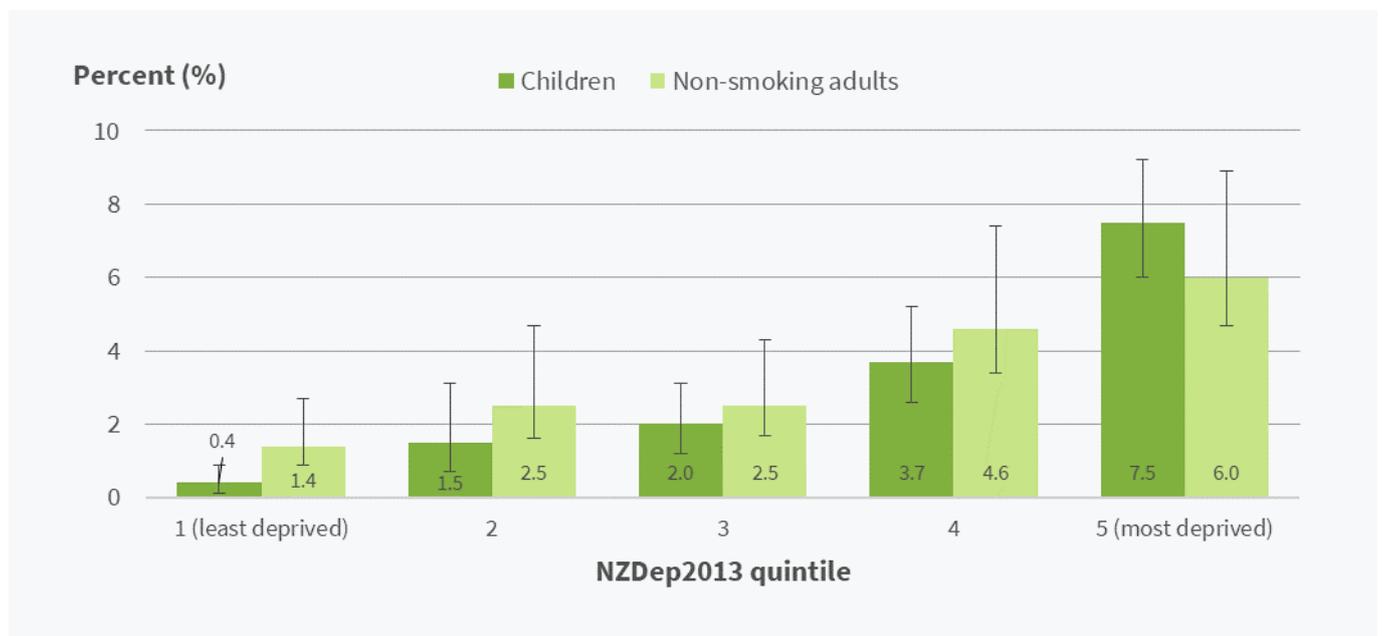
Source: New Zealand Health Survey (Ministry of Health 2020)

Children and non-smoking adults in the most deprived areas had the highest exposure to second-hand smoke

Children (7.5%) and non-smoking adults (6.0%) living in the most deprived areas were more likely to be exposed to second-hand smoke in the home than those living in the least deprived areas (NZDep2013 quintile 1) in 2015/16 (Figure 3).

After adjusting for age, sex, and ethnic differences, children living in the most deprived neighbourhoods (NZDep2013 quintile 5) were 18.05 times as likely to be exposed to second-hand smoke in their home as those in the least deprived neighbourhoods (adjusted rate ratio 18.05, 7.22–45.15). For non-smoking adults, those that lived in the most deprived areas were 3.65 times as likely to be exposed to second-hand smoke in their home than those in the least deprived areas (adjusted rate ratio 3.65, 2.04–6.56).

Figure 3: Exposure to second-hand smoke in the home, among children and non-smoking adults, by neighbourhood deprivation (NZDep2013 quintiles), 2015/16 (unadjusted prevalence)



Note: 95% confidence intervals have been presented as error bars.
Source: New Zealand Health Survey (Ministry of Health 2020)

Data for this indicator

This indicator includes the most recent data available from the Tobacco and Electronic Cigarette Use module from the 2015/16 New Zealand Health Survey, published by the Ministry of Health in June 2020.

Crude rates presented in this factsheet do not take into account varying age distributions when comparing between populations. Rate ratios are presented to 2 decimal places.

All 95% confidence intervals have been presented as error bars on graphs. Unless otherwise stated, all differences mentioned in the text between two values are statistically significant at the 5% level or less.

For additional information, see the metadata link below.

References

Ministry of Health. 2020. *Tobacco and Electronic Cigarette Use 2015/16: New Zealand Health Survey*. Wellington: Ministry of Health.

US Department of Health and Human Services. 2014. *The Health Consequences of Smoking – 50 Years of Progress. A Report of the Surgeon General*. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention.

US Surgeon General. 2006. *The Health Consequences of Involuntary Exposure to Tobacco Smoke, A Report of the Surgeon General*. Rockville, MD: US Department of Health and Human Services.

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Further information

For descriptive information about the data