

Chapter 2: Smoking

Key points

- Smoking is one of the major causes of preventable death in developed countries. Around one in five deaths in New Zealand have been attributed to smoking.
- The results of the 1996/97 Health Survey showed that around one quarter of all New Zealanders are current smokers. This includes 26.4% of men and 23.5% of women.
- In general, younger people were more likely to smoke than older people. Women in the youngest age group (15–24 years) smoked more than men of the same age.
- Around a quarter of the population reported that they were ex-smokers. More men and older people were ex-smokers compared with women and younger people.
- There were major ethnic differences in smoking rates. Nearly half of all Māori adults reported that they were current smokers compared with 23.2% of European/Pākehā, 27.7% of Pacific and 10.1% of 'Other' adults.
- Smoking prevalence was shown to be strongly related to socioeconomic status, whether measured in terms of family income, educational status or NZDep96 score. In all cases, people in lower socioeconomic groups were more likely to be smokers.
- Smokers tended to rate their own health more poorly, and tended to see their GPs more often than non-smokers.
- Around one in eight smokers reported that they smoked more than 20 cigarettes per day. Men and smokers aged between 45 and 64 years were more likely to smoke heavily. Pacific smokers reported that they smoked less heavily compared with European/Pākehā or Māori smokers.
- Māori adults reported starting to smoke at an earlier age compared with European/Pākehā or Pacific ever-smokers.
- Men, Māori adults, people with lower educational status and those living in more deprived areas were more likely to have smoked for more than 20 years compared with people without these characteristics.
- More than one in five smokers were either thinking about or doing things to help them stop smoking.
- Nearly half of all non- and ex-smokers reported that they were bothered a lot by cigarette smoke. A further one-third reported being bothered a little.

Introduction

Smoking has been identified as the major cause of preventable death in developed countries (World Health Organization 1997). It has been estimated that about half of all deaths around the world in the 35–69 years age group are caused by smoking (Peto et al 1992). In New Zealand, in 1990, nearly one in five of all deaths was attributed to tobacco smoking (Peto et al 1994). Smoking has been linked to increased rates of cancer (including cancers of the lung, mouth, pharynx, oesophagus, larynx, pancreas and kidney), heart disease, stroke, and chronic respiratory diseases (US Office on Smoking and Health 1989; Doll 1998).

Exposure to environmental tobacco smoke (ETS) may be associated with higher rates of lung cancer and heart disease among adults (Beaglehole 1990; Howard et al 1998). Among children, ETS is associated with higher rates of sudden infant death syndrome (cot death) (Scragg et al 1993; Mitchell et al 1997), asthma (Gortmaker et al 1982; Weitzman et al 1990; Sears et al 1996), other respiratory problems and glue ear (NHMRC Working Party 1995).

It has been conservatively estimated that smoking cost the New Zealand health system more than \$185 million in extra hospital, GP and prescription drug costs alone in 1989 (Phillips et al 1992). Another study, which took into account the theoretical benefits of smoking (to those minority of smokers who are not nicotine dependent) as well as all the costs, puts the overall social cost of smoking in New Zealand at 3.2% of total human capital and 1.7% of GDP (Easton 1997). The costs, totalled \$22.5 billion for the 1990 year (relative to a scenario of no smoking), with tangible costs of \$1.2 billion.

To examine the prevalence and patterns of smoking in New Zealand, a number of smoking questions were included in the 1996/97 Health Survey. These aimed to expand on the information provided by the two questions in the 1992/93 Health Survey and the smoking questions in the 1996 Census. The questions are shown in Table 1. However, it has been shown that self-reported smoking rates under-estimate the true prevalence of smoking in the community (Hedges 1996; Tappin et al 1997), which means that all these surveys are likely to under-estimate the number of smokers in New Zealand.

For this survey, 'current smokers' are defined as those who reported that they smoked one or more cigarettes per day; 'ex-smokers' are those who reported that they do not smoke currently but that they have smoked in the past; 'ever smokers' are current and ex-smokers combined; and 'non-smokers' are people who have never smoked cigarettes regularly.

Unless otherwise stated, age- and sex-standardised rates, and 95% confidence intervals in parentheses, have been given in the text. Tables at the end of this section show key standardised and unstandardised estimates. More detailed tables related to this section are available on the Ministry of Health website (www.moh.govt.nz).

Table 1: Questions on smoking from the 1992/93 Household Health Survey, the 1996 Census and the 1996/97 New Zealand Health Survey

1992/93 Household Health Survey	<ul style="list-style-type: none"> • Would you describe yourself as a tobacco smoker, an ex-smoker or a non-smoker? • Thinking now only about cigarette smoking, about how many tailor-made or roll-your-own cigarettes would you smoke in an average day?
1996 Census	<ul style="list-style-type: none"> • Do you smoke cigarettes regularly, that is, one or more per day? • Have you ever been a regular smoker of one or more cigarettes per day?
1996/97 New Zealand Health Survey	<ul style="list-style-type: none"> • Do you smoke one or more tobacco cigarettes in a day? • Have you ever been a regular smoker of cigarettes? • About how many cigarettes do you smoke in an average day? • At what age did you regularly smoke one or more cigarettes per day? • At what age did you start regularly smoking one or more cigarettes per day?

Results

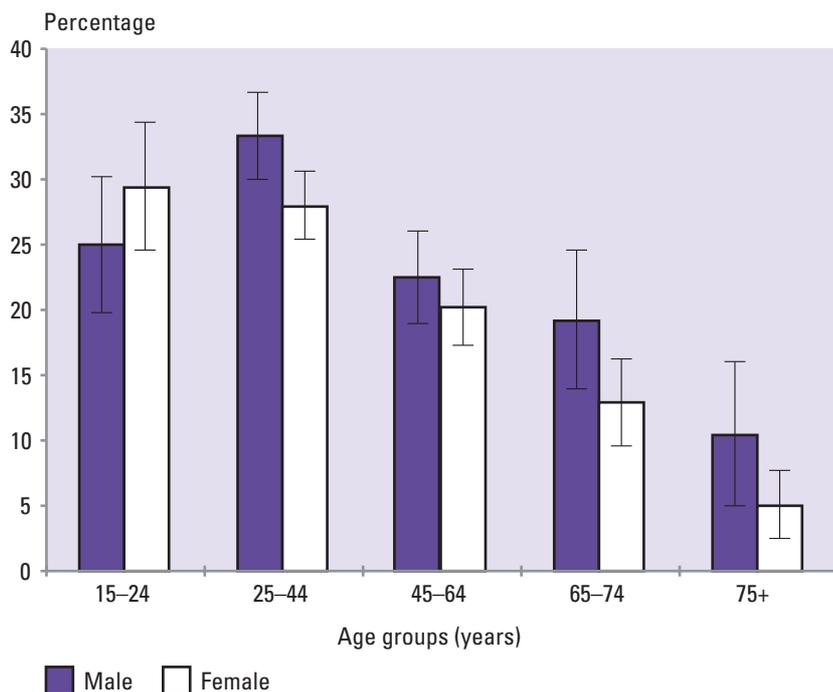
Smoking status

Smoking status by age and sex

A quarter (24.9%; 23.5–26.3) of the adult population reported that they were current smokers in the 1996/97 Health Survey. Males were more likely to smoke than females (26.4%; 24.4–28.4 and 23.5%; 21.9–25.1 respectively; $p < 0.0001$) and, in general, younger people smoked more than older people ($p < 0.0001$). Although men smoked more than women overall, young women (15–24 years) were more likely to be smokers than men of the same age (see Figure 1).

Twenty-three percent of the adults aged 15 years or older in the 1992/93 Health Survey (Statistics New Zealand and Ministry of Health 1993), and 23.4% in the 1996 Census (Statistics New Zealand 1998) reported that they were current smokers. Of note, however, is that in the 1996 Census around 8% of respondents did not answer the questions on smoking compared with 0.2% in the 1996/97 Health Survey. Men were over-represented among smokers in all these surveys, but all showed higher smoking rates among young women compared with young men. A recent study carried out by the Cancer Society has shown that the rate of smoking among school-aged girls is higher than that of boys, and is increasing faster (Bandaranayake and McCool 1997). If this trend continues, the difference in smoking rates between men and women may reduce, and may even reverse.

Figure 1: Proportion of people who are current smokers, by age and sex

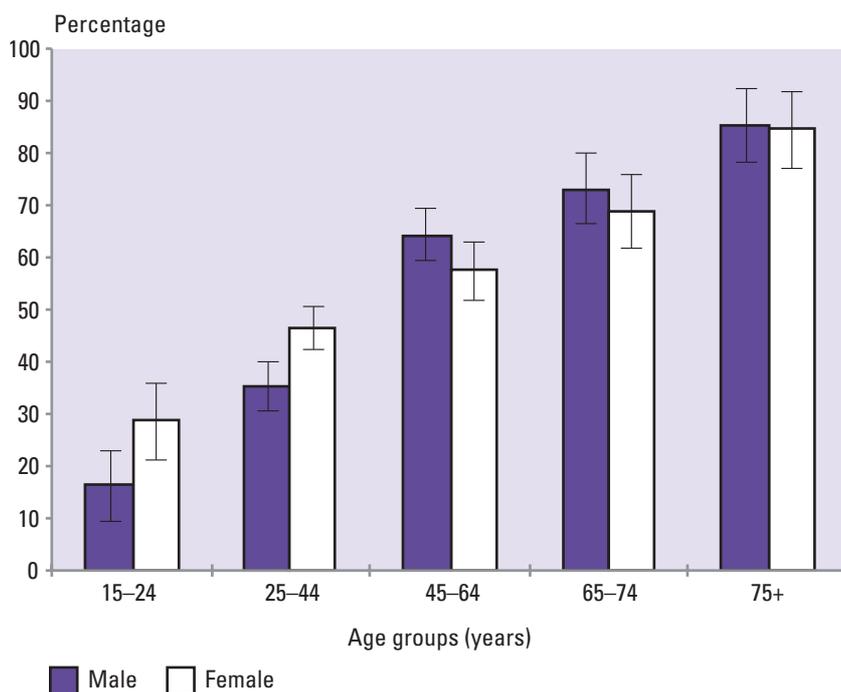


Note: Error bars indicate 95% confidence intervals.
For further explanation of graphs, see Appendix 2: Notes to Figures and Tables.

A quarter of the adults in the 1996/97 Health Survey reported that they were ex-smokers. The proportion of ex-smokers among males increased with age. Only around 1 in 20 (4.9%; 2.7–7.1) 15–24-year-old males reported that they were ex-smokers, compared with over half (55.3%; 50.4–60.2) the males aged over 65 years. The proportion of female ex-smokers in the population remained steady from the age of 25 years at just over a quarter of each age group. This pattern is at least partially explained by the fact that older women are less likely to have ever smoked than older men.

Because of this, it is useful to look at the proportion of ever-smokers who are ex-smokers. This is the so-called 'quit ratio'. In 1996/97 exactly half of those who had ever smoked had quit smoking. This compares with 45% in the 1992/93 Health Survey (Ministry of Health 1995). Around half of both male and female ever-smokers had stopped smoking, but for both sexes, with increasing age, increasing proportions of ever-smokers had quit smoking (see Figure 2).

Figure 2: Proportion of ever-smokers who are ex-smokers (quit ratios), by age and sex

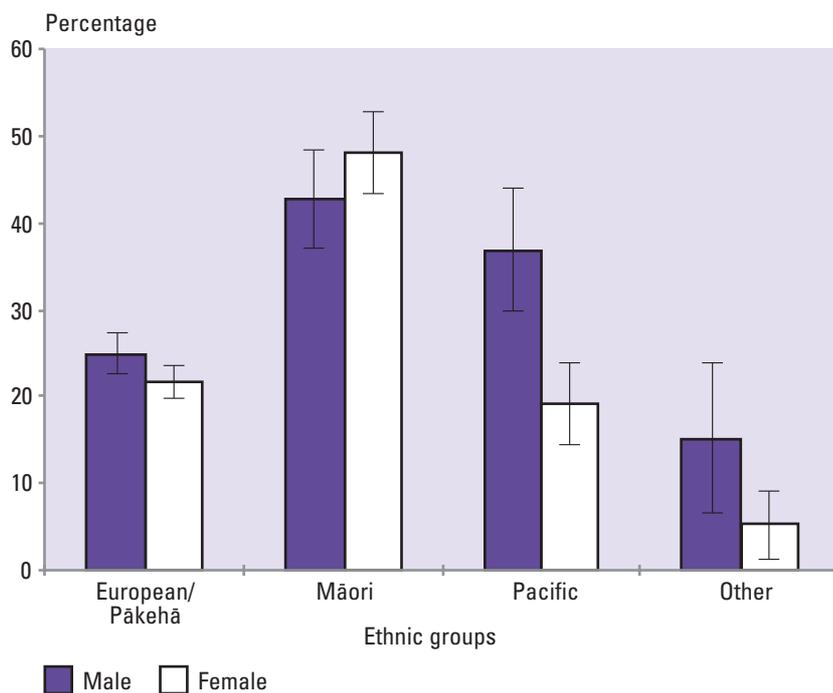


Note: Error bars indicate 95% confidence intervals.
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Smoking status by ethnicity

There were highly significant differences in the rates of current smoking between ethnic groups ($p < 0.0001$). Nearly half (45.5%; 41.8–49.2) of all Māori adults 15 years and over reported that they were current smokers, compared with 23.2% (21.6–24.8) of European/Pākehā adults, 27.7% (22.8–32.6) of Pacific adults and only 10.1% (5.4–14.8) of people from the Other ethnic group. A similar trend was seen for both sexes, but was strongest for females (see Figure 3). Among women, Māori had the highest smoking rates (48.2%; 43.5–52.9; $p < 0.0001$) compared with European/Pākehā (21.7%; 19.7–23.7), Pacific (19.2%; 14.5–23.9) and Other women (5.3%; 1.4–9.2). Smoking rates were particularly high among younger Māori women. Nearly 60% of Māori women aged between 15 and 44 years were smokers. This compares with around a quarter of European/Pākehā women and around one in five Pacific women of the same age (see Table 2). These patterns are very similar to those seen in other recent New Zealand surveys (Statistics New Zealand and Ministry of Health 1993; Parr et al 1998; Statistics New Zealand 1998).

Figure 3: Proportion of people who are current smokers, by ethnicity and sex (age-standardised)



Note: Error bars indicate 95% confidence intervals.
For further explanation of graphs, see Appendix 2: Notes to Figures and Tables.

Table 2: Proportion of current smokers by age, sex and ethnicity: percent (95% confidence intervals)

	European/Pākehā % (95% CI)	Māori % (95% CI)	Pacific % (95% CI)
Male			
15–24 years	24.5 (17.8–31.2)	38.4 (25.5–51.3)	29.7 (15.8–43.6)
25–44 years	31.2 (27.3–35.1)	52.8 (44.0–61.6)	33.7 (23.1–44.3)
45–64 years	20.7 (17.0–24.4)	34.2 (23.8–44.6)	47.0 (31.5–62.5)
65+ years	15.2 (11.1–19.3)	34.6 (17.7–51.5)	48.8 (15.9–81.7)
Female			
15–24 years	26.6 (20.3–32.9)	56.3 (47.3–65.3)	18.5 (10.5–26.5)
25–44 years	25.4 (22.3–28.5)	58.2 (52.5–63.9)	26.1 (19.8–32.4)
45–64 years	19.2 (15.9–22.5)	41.0 (31.6–50.4)	13.8 (3.6–24.0)
65+ years	9.3 (6.9–11.7)	21.7 (9.9–33.5)	8.9 (0.0–19.7)

Note: There were insufficient numbers in the Other ethnic group to calculate age-specific estimates of smokers.

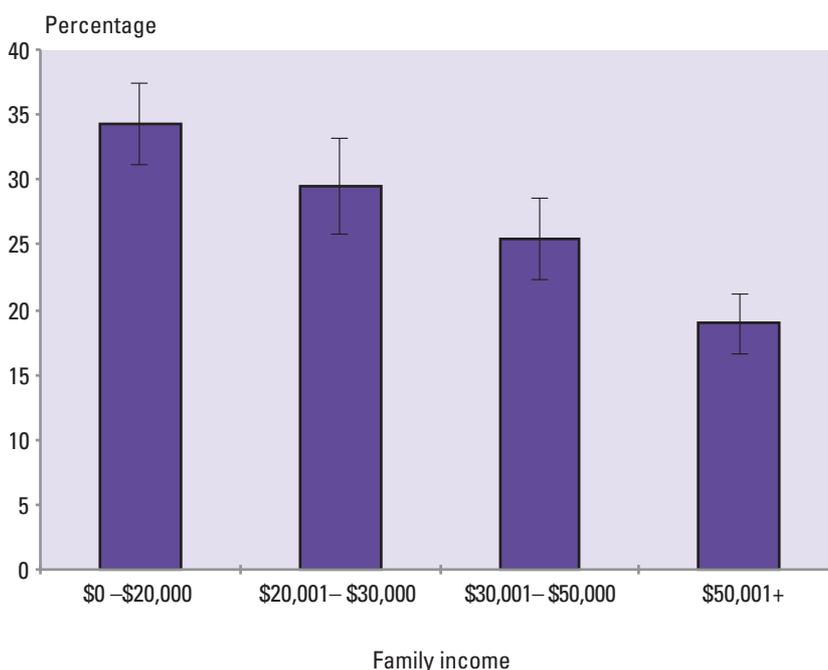
Smoking status by family income, education and NZDep96* score

The rates of current smoking for both men and women were strongly related to socioeconomic status regardless of which indicator was used (all $p < 0.0001$, see Figures 4, 5 and 6). The patterns were present for both unadjusted and age-adjusted rates, but tended to be stronger when the adjustment for age was made. For example, over double the proportion of people living in the most deprived areas of New Zealand (in the fourth quartile) reported that they were current smokers compared to those living in the least deprived areas (in the first quartile) as measured by the NZDep96 score (see Figure 6).

In the 1992/93 Health Survey, smoking was similarly strongly associated with education and, to a lesser extent, family income (Statistics New Zealand and Ministry of Health 1993). In 1992/93, 35% of those without any formal qualifications were smokers compared with 19% of those with post-school qualifications. In 1996/97 the comparable proportions were 36.4% and 17.7% respectively.

The results linking smoking to socioeconomic status are consistent with the findings of previous studies both in New Zealand (Whitlock et al 1997) and overseas (Health and Welfare Canada 1988; Bridgwood et al 1996; Hedges 1996).

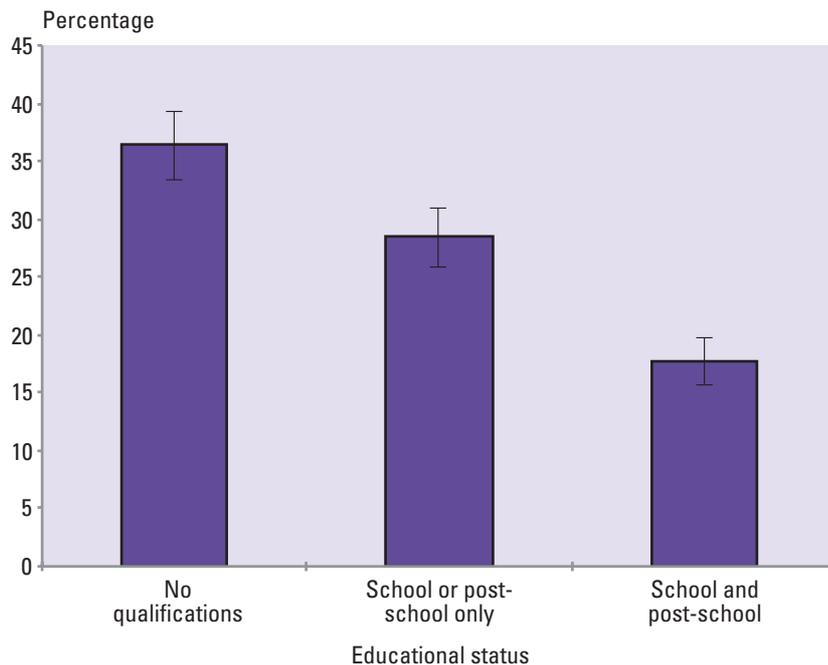
Figure 4: Proportion of people who are current smokers, by family income (age- and sex-standardised)



Note: Error bars indicate 95% confidence intervals.
For further explanation of graphs, see Appendix 2: Notes to Figures and Tables.

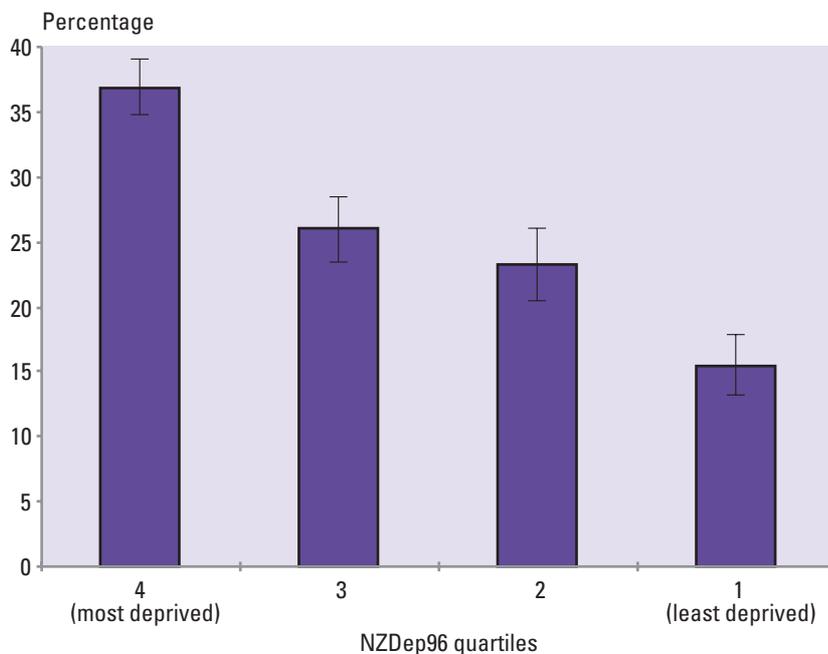
* The NZDep96 score measures the level of deprivation in the area in which a person lives, according to a number of census variables, such as the proportion of people in that area who earn low incomes or who receive income support benefits, are unemployed, do not own their own home, have no access to a car, are single-parent families, or have no qualifications. The scores are divided into quartiles from 1 (least deprived) to 4 (most deprived). For more details, see Chapter 1: The Survey.

Figure 5: Proportion of people who are current smokers, by education (age- and sex-standardised)



Note: Error bars indicate 95% confidence intervals.
For further explanation of graphs, see Appendix 2: Notes to Figures and Tables.

Figure 6: Proportion of people who are current smokers, by NZDep96 score (age- and sex-standardised)



Note: Error bars indicate 95% confidence intervals.
For further explanation of graphs, see Appendix 2: Notes to Figures and Tables.

Smoking status by self-rated health status

Smokers tended to assess their health as poorer than that of non-smokers ($p < 0.0001$, see Table 3). For example, while only 1 in 11 (8.9%; 7.7–10.1) non-smokers said that they feel that their health is fair or poor, nearly a fifth (18.4%; 16.0–20.8) of all smokers felt this way. A similar pattern was seen among both males and females. For more detail on the relationship between smoking and self-reported health, see Chapter 11: SF-36 Health Status Questionnaire: Health Risk Behaviours, Specific Conditions and Health Service Utilisation.

Table 3: Self-rated health status, by smoking status: percent (95% confidence intervals)

	Excellent/very good % (95% CI)		Good % (95% CI)		Fair/poor % (95% CI)	
	Unadj	Adj*	Unadj	Adj*	Unadj	Adj*
Current smoker	50.1 (47.2–53.0)	58.6 (45.7–51.5)	32.9 (30.2–25.6)	33.0 (30.3–35.7)	17.0 (14.8–19.2)	18.4 (16.0–20.8)
Ex-smoker	54.0 (50.7–57.3)	57.0 (53.1–60.9)	32.0 (28.9–35.1)	31.1 (27.2–35.0)	13.9 (12.1–15.7)	11.9 (9.9–13.9)
Non-smoker	64.4 (62.0–66.8)	64.2 (61.8–66.6)	26.6 (24.4–28.8)	26.9 (24.7–29.1)	9.0 (7.6–10.4)	8.9 (7.7–10.1)

* Adjusted rates are adjusted for age and sex.

Note: For further explanation of Tables, see Appendix 2: Notes to Figures and Tables.

Smoking status by health service utilisation

Current smokers and ex-smokers were significantly more likely to have visited their GP six or more times in the last year compared with non-smokers ($p < 0.001$). Around one in five of both smokers (17.5%; 15.1–19.9) and ex-smokers (18.9%; 15.8–22.0) reported that they had visited their GP at least six times in the last year, compared with around one in eight non-smokers (11.8%; 10.4–13.2). There was no statistically significant difference in the age-standardised rates of hospital admissions in the previous 12 months for current, ex- or non-smokers. Around 16% of both current and ex-smokers (15.7%; 13.5–17.9 and 15.9%; 13.2–18.6 respectively) were admitted to a hospital in the last 12 months compared with 13.4% (11.8–15.0) of non-smokers.

Who is most at risk of the health effects of smoking?

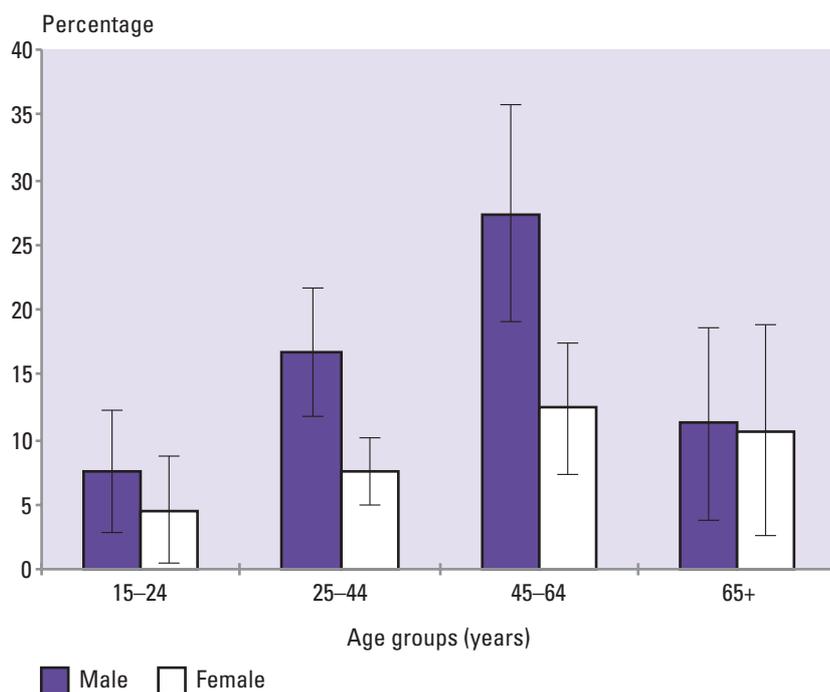
The health effects of smoking are closely related to both the number of cigarettes smoked and the number of years that one smokes. The duration of smoking is, in turn, related to the age at which smoking begins.

Number of cigarettes smoked

Those smoking the highest number of cigarettes are most at risk of developing serious health effects from their smoking. Overall, more than 4 in 10 smokers reported that they smoked 10 or fewer cigarettes per day, and a similar proportion reported smoking between 11 and 20 cigarettes per day. The remaining 12.8% (10.6–15.0) of smokers reported smoking more than 20 cigarettes on most days. These results are very similar to those found in the 1992/93 Health Survey (Statistics New Zealand and Ministry of Health 1993).

The 1996/97 Health Survey found that, overall, more men than women smokers reported smoking more than 20 cigarettes per day (17.0%; 13.7–20.3 compared with 8.1%; 5.9–10.3; $p < 0.0001$). Male smokers aged 45–64 years tended to smoke the most heavily, with over one quarter (27.4%; 19.0–35.8) of this group reporting that they smoked more than 20 cigarettes per day. In the same age group for women, around one in eight (12.4%; 7.3–17.5) said they smoked more than 20 cigarettes per day (see Figure 7). On the other hand, the youngest and oldest smokers, especially females, were most likely to report smoking 10 or fewer cigarettes per day.

Figure 7: Proportion of smokers smoking more than 20 cigarettes per day, by age and sex



Note: Error bars indicate 95% confidence intervals.
For further explanation of graphs, see Appendix 2: Notes to Figures and Tables.

After differences in age and sex were accounted for, Pacific smokers reported smoking less heavily than European/Pākehā or Māori smokers ($p < 0.0001$). For example, nearly two-thirds (65.3%; 54.5–76.1) of Pacific smokers reported smoking 10 or fewer cigarettes per day compared with just under half of Māori smokers (47.3%; 42.2–52.4) and 4 in 10 European/Pākehā smokers (40.3%; 36.6–44.0).

The number of cigarettes smoked was not significantly associated with family income or with NZDep96 scores, but smokers with higher levels of education were less likely to smoke heavily than those with lower levels of education ($p < 0.05$).

Of note, previous studies have shown that people tend to under-estimate the number of cigarettes they smoke by over a quarter (Jackson and Beaglehole 1985). This means that the reported number of cigarettes smoked is likely to be an under-estimate.

Age at starting to smoke

Overall, around three-quarters (73.8%; 72.0–75.6) of all ever-smokers (current or ex) said they started to smoke regularly between the ages of 15 and 24 years. A further one in five (19.2%; 17.6–20.8) of these said they started to smoke before age 15 years.

After differences in age were accounted for, Māori ever-smokers tended to start smoking earlier than other ethnic groups ($p < 0.0001$). Around a third (31.4%; 27.9–34.9) of these reported starting to smoke regularly prior to age 15 years compared to 17.6% (15.6–19.6) of European/Pākehā and 13.8% (7.1–20.5) of Pacific smokers. This is consistent with studies of smoking rates among school-aged adolescents in New Zealand, which show young Māori have higher smoking rates than other teenagers (Bandaranayake and McCool 1997; Coggan et al 1997).

Starting to smoke before age 15 years was also significantly associated with lower levels of family income, lower educational attainment and living in more deprived areas (all $p < 0.0001$).

Duration of smoking

The health effects of smoking are strongly related to how long a person smokes for. Four in ten (40.3%; 38.1–42.5) ever-smokers (current or ex) reported smoking for over 20 years. After differences in age were accounted for, male ever-smokers were more likely to have smoked for over 20 years (46.1%; 43.0–49.2; $p < 0.0001$) compared with females (34.0%; 31.3–36.7). There were significant differences across ethnic group in the duration of smoking ($p < 0.01$), with 45.5% (41.4–49.6) of Māori, 39.5% (37.0–42.0) of European/Pākehā and 41.5% (33.5–49.5) of Pacific people reporting that they had smoked for over 20 years.

Similarly, people with lower educational status ($p < 0.0001$) and those living in more deprived areas ($p < 0.01$) were more likely to report that they had smoked for longer than 20 years. Family income was not significantly related to the duration of smoking.

Quitting status of smokers

Studies have shown that the resolve to give up smoking predicts quitting behaviour to some extent (Marsh and Matheson 1983; Pederson et al 1987). For this reason, smokers were asked the following question:

Which of these statements best describes you now?

- *I have no thoughts of quitting smoking.*
- *I think I need to consider quitting smoking some day.*
- *I think I should quit smoking but I'm not quite ready.*
- *I think about doing things that will help me quit smoking.*
- *I'm doing things that will help me quit smoking.*

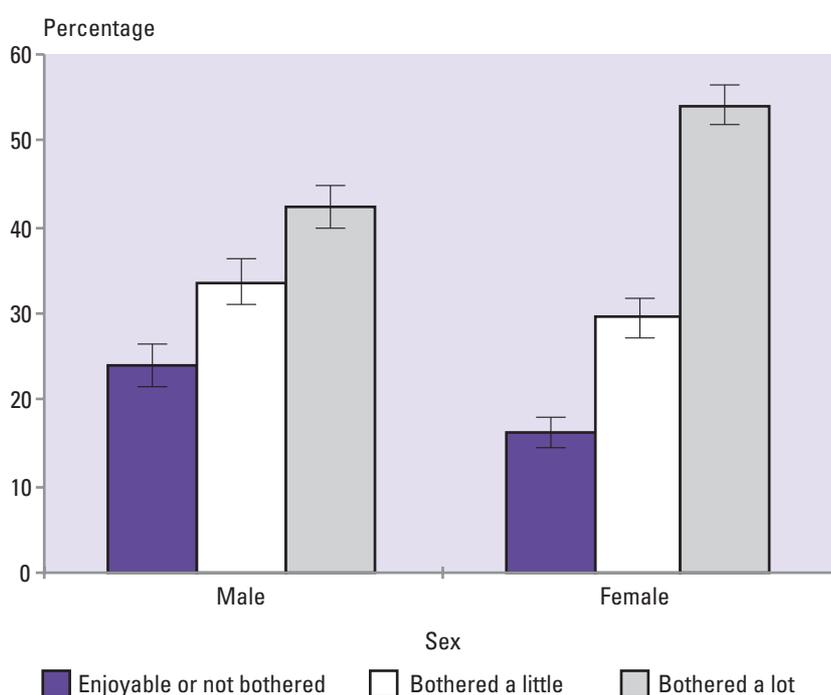
Overall, more than one in five smokers (22.3%; 19.8–24.8) were either thinking about or doing things to help them stop smoking. Younger smokers tended to be more likely than older smokers to be thinking about or doing things to help them stop smoking.

There were some differences across ethnic groups in the reported readiness of people to give up smoking ($p < 0.01$). Twenty-four percent (20.7–27.3) of European/Pākehā people reported that they were thinking about or doing things that would help them quit smoking, with the proportions for Māori and Pacific people being 19.3% (15.6–23.0) and 19.3% (12.6–26.0) respectively. European/Pākehā people were also less likely to report that they had no thoughts of quitting or need to consider quitting some day (39.7%; 36.0–43.4 for European/Pākehā, 48.4%; 43.3–53.5 for Māori and 51.2%; 41.4–61.0 for Pacific people).

Non-smokers' attitude to others' smoke

Non-smokers and ex-smokers were asked about how they felt when they were exposed to others' cigarette smoke. Just under half of them reported that they were bothered a lot by cigarette smoke and nearly a further third were bothered a little. Only one in five non- and ex-smokers were not bothered at all by others' smoke or found it enjoyable. Women were more likely than men to report being bothered a lot by others' smoke ($p < 0.0001$), while men were more likely to report not being bothered or finding others' smoke enjoyable ($p < 0.01$) (see Figure 8). Those under age 25 years and those over 65 years were less likely to be bothered a lot and more likely to be not bothered or to find others' smoke enjoyable, than other age groups (see Figure 9).

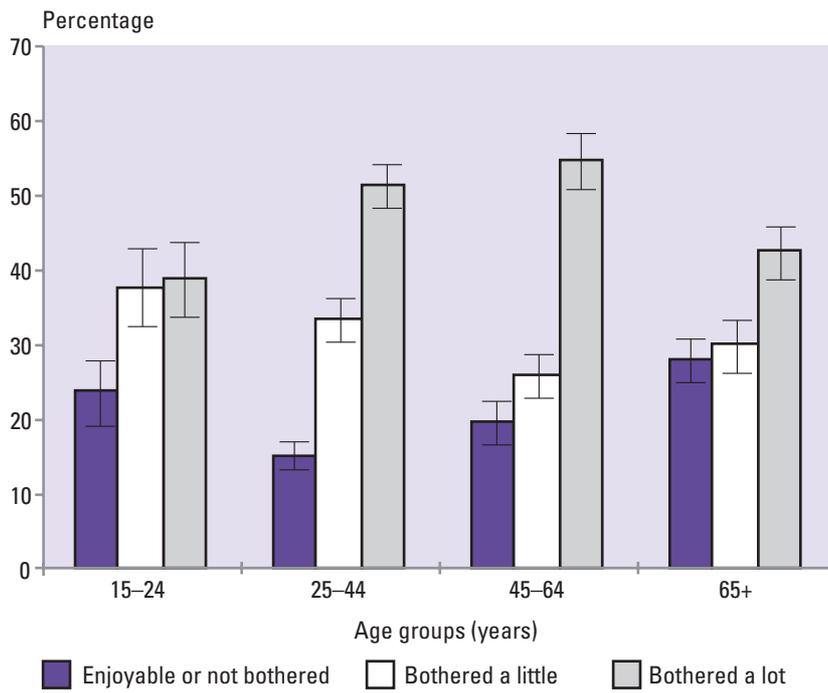
Figure 8: Non- and ex-smokers' attitude to others' smoke, by sex (age-standardised)



Note: Error bars indicate 95% confidence intervals.

For further explanation of graphs, see Appendix 2: Notes to Figures and Tables.

Figure 9: Non- and ex-smokers' attitude to others' smoke, by age (sex-standardised)



Note: Error bars indicate 95% confidence intervals.
For further explanation of graphs, see Appendix 2: Notes to Figures and Tables.

Table 4: Smoking status, by sociodemographic variables: percent (95% confidence intervals)

	Current smokers			Ex-smokers			Never smoked		
	%		Pop est	%		Pop est	%		Pop est
	(95% CI)			(95% CI)			(95% CI)		
Unadj	Adj*	Unadj	Adj*	Unadj	Adj*				
Total	24.9 (23.5–26.3)		701,351	24.9 (23.5–26.3)		702,767	50.2 (48.6–51.8)		1,413,946
Sex									
Male	26.5 (24.5–28.5)	26.4 (24.4–28.4)	363,189	26.6 (24.6–28.6)	27.0 (25.0–29.0)	364,026	46.9 (44.5–49.3)	46.6 (44.2–49.0)	642,813
Female	23.4 (21.8–25.0)	23.5 (21.9–25.1)	338,162	23.4 (21.6–25.2)	23.3 (21.5–25.1)	338,741	53.3 (51.3–55.3)	53.2 (51.2–55.2)	771,134
Age									
15–24 years	27.2 (23.5–30.9)	27.3 (23.6–31.0)	142,804	8.4 (6.2–10.6)	8.5 (6.3–10.7)	43,872	64.4 (60.1–68.7)	64.2 (59.9–68.5)	338,221
25–44 years	30.6 (28.4–32.8)	30.6 (28.4–32.8)	348,450	21.3 (19.3–23.3)	21.3 (19.3–23.3)	243,210	48.1 (45.7–50.5)	48.1 (45.7–50.5)	548,891
45–64 years	21.3 (18.9–23.7)	21.3 (18.9–23.7)	159,550	33.7 (30.8–36.6)	33.6 (30.7–36.5)	252,513	44.9 (42.0–47.8)	45.1 (42.2–48.0)	336,274
65–74 years	16.0 (12.9–19.1)	16.3 (13.2–19.4)	39,027	40.3 (36.2–44.4)	41.3 (37.2–45.4)	98,268	43.7 (39.2–48.2)	42.4 (37.9–46.9)	106,720
75+ years	7.2 (4.5–9.9)	7.4 (4.7–10.1)	11,519	40.5 (35.6–45.4)	41.9 (37.0–46.8)	64,904	52.3 (47.0–57.6)	50.7 (45.4–56.0)	83,841
Ethnicity									
European/ Pākehā	22.7 (21.1–24.3)	23.2 (21.6–24.8)	513,021	27.0 (25.4–28.6)	26.1 (24.5–27.7)	611,063	50.3 (48.3–52.3)	50.6 (48.6–52.6)	1,138,349
Māori	48.6 (44.9–52.3)	45.5 (41.8–49.2)	135,353	19.3 (16.6–22.0)	22.9 (19.8–26.0)	53,878	32.1 (28.4–35.8)	31.6 (28.1–35.1)	89,336
Pacific	28.0 (23.7–32.3)	27.7 (22.8–32.6)	36,777	14.6 (11.5–17.7)	16.7 (12.8–20.6)	19,204	57.4 (52.9–61.9)	55.6 (50.3–60.9)	75,296
Other	11.1 (6.2–16.0)	10.1 (5.4–14.8)	16,200	12.8 (7.1–18.5)	19.4 (10.6–28.2)	18,623	76.1 (69.0–83.2)	70.5 (61.3–79.7)	110,965
Family income									
0–\$20,000	27.4 (25.0–29.8)	34.3 (31.2–37.4)	137,926	28.7 (26.2–31.2)	22.9 (20.0–25.8)	144,206	43.9 (41.0–46.8)	42.8 (39.1–46.5)	220,871
\$20,001–\$30,000	25.9 (22.8–29.0)	29.5 (25.8–33.2)	98,071	29.0 (25.7–32.3)	25.6 (22.1–29.1)	109,950	45.1 (41.0–49.2)	44.9 (40.4–49.4)	170,916
\$30,001–\$50,000	26.8 (23.9–29.7)	25.5 (22.4–28.6)	143,121	24.3 (21.4–27.2)	23.9 (21.0–26.8)	129,908	49.0 (45.7–52.3)	50.5 (47.0–54.0)	261,914
\$50,001+	20.2 (17.7–22.7)	18.9 (16.4–21.4)	175,625	26.4 (23.5–29.3)	28.1 (25.0–31.2)	229,544	53.5 (50.4–56.6)	53.0 (49.7–56.3)	465,893
NZDep96 score									
1 (least deprived)	15.7 (13.3–18.1)	15.5 (13.1–17.9)	126,796	27.2 (24.3–30.1)	27.1 (24.0–30.2)	219,025	57.1 (53.8–60.4)	57.5 (54.0–61.0)	460,895
2	23.0 (20.3–25.7)	23.3 (20.6–26.0)	161,042	23.8 (21.4–26.2)	22.9 (20.5–25.3)	166,550	53.2 (49.9–56.5)	53.8 (50.3–57.3)	372,843
3	26.0 (23.5–28.5)	26.0 (23.5–28.5)	164,290	25.6 (23.1–28.1)	26.2 (23.7–28.7)	161,761	48.5 (45.6–51.4)	47.8 (44.9–50.7)	306,954
4 (most deprived)	36.8 (34.6–39.0)	36.9 (34.7–39.1)	249,223	22.9 (20.9–24.9)	23.8 (21.8–25.8)	155,431	40.3 (37.6–43.0)	39.3 (36.8–41.8)	273,255
Education									
No qualifications	32.6 (30.1–35.1)	36.4 (33.5–39.3)	262,245	24.8 (22.6–27.0)	23.2 (20.8–25.6)	200,149	42.6 (39.7–45.5)	40.4 (37.5–43.3)	343,224
School or post-school only	26.0 (23.8–28.2)	28.5 (26.0–31.0)	261,590	24.3 (22.1–26.5)	24.7 (22.3–27.1)	244,515	49.8 (47.3–52.3)	46.7 (44.0–49.4)	501,946
School and post-school	17.8 (15.8–19.8)	17.7 (15.7–19.7)	176,523	25.5 (23.1–27.9)	25.4 (22.9–27.9)	253,143	56.7 (54.0–59.4)	56.9 (54.2–59.6)	562,492

* Adjusted rates are adjusted for age and sex, except when they are age-specific, in which case they are adjusted only for sex, or when they are sex-specific, in which case they are adjusted only for age.

Note: For further explanation of Tables, see Appendix 2: Notes to Figures and Tables.

Table 5: Smoking status, by age and ethnicity for males: percent (95% confidence intervals)

Males	Current smokers			Ex-smokers			Never smoked		
	%		Pop est	%		Pop est	%		Pop est
	(95% CI)			(95% CI)			(95% CI)		
Unadj	Adj*	Unadj	Adj*	Unadj	Adj*	Unadj	Adj*		
Total	26.5 (24.5–28.5)	26.4 (24.4–28.4)	363,189	26.6 (24.6–28.6)	27.0 (25.0–29.0)	364,026	46.9 (44.5–49.3)	46.6 (44.2–49.0)	642,813
Age									
15–24 years	25.0 (19.7–30.3)		65,872	4.9 (2.7–7.1)		12,870	70.1 (64.4–75.8)		184,700
25–44 years	33.3 (30.0–36.6)		184,725	18.4 (15.7–21.1)		101,868	48.4 (44.9–51.9)		268,489
45–64 years	22.5 (19.0–26.0)		83,600	40.3 (35.8–44.8)		150,159	37.2 (32.7–41.7)		138,545
65–74 years	19.2 (13.9–24.5)		22,414	52.5 (46.2–58.8)		61,230	28.3 (22.4–34.2)		32,991
75+ years	10.5 (5.0–16.0)		6,578	60.6 (52.8–68.4)		37,899	28.9 (21.1–36.7)		18,089
Ethnicity									
European/ Pākehā	24.5 (22.1–26.9)	24.9 (22.5–27.3)	270,422	28.8 (26.4–31.2)	27.5 (25.1–29.9)	317,687	46.6 (43.9–49.3)	47.6 (44.9–50.3)	513,628
Māori	43.8 (38.1–49.5)	42.6 (36.9–48.3)	57,802	19.7 (15.2–24.2)	24.0 (18.9–29.1)	26,003	36.4 (30.1–42.7)	33.3 (27.6–39.0)	48,021
Pacific	35.2 (28.1–42.3)	36.8 (29.4–44.2)	22,859	15.5 (10.6–20.4)	20.6 (14.1–27.1)	10,029	49.3 (41.9–56.7)	42.6 (35.0–50.2)	31,961
Other	16.9 (7.5–26.3)	15.1 (6.5–23.7)	12,106	14.4 (5.8–23.0)	22.4 (9.5–35.3)	10,308	68.7 (56.7–80.7)	62.5 (49.0–76.0)	49,203

* Adjusted rates are adjusted for age.

Note: For further explanation of Tables, see Appendix 2: Notes to Figures and Tables.

Table 6: Smoking status, by age and ethnicity for females: percent (95% confidence intervals)

Females	Current smokers			Ex-smokers			Never smoked		
	%		Pop est	%		Pop est	%		Pop est
	(95% CI)			(95% CI)			(95% CI)		
Unadj	Adj*	Unadj	Adj*	Unadj	Adj*	Unadj	Adj*		
Total	23.4 (21.8–25.0)	23.5 (21.9–25.1)	338,162	23.4 (21.6–25.2)	23.3 (21.5–25.1)	338,741	53.3 (51.3–55.3)	53.2 (51.2–55.2)	771,134
Age									
15–24 years	29.4 (24.5–34.3)		76,932	11.9 (8.4–15.4)		31,002	58.7 (53.0–64.4)		153,521
25–44 years	28.0 (25.5–30.5)		163,725	24.1 (21.4–26.8)		141,341	47.9 (44.8–51.0)		280,402
45–64 years	20.2 (17.3–23.1)		75,950	27.2 (23.5–30.9)		102,355	52.6 (48.7–56.5)		197,729
65–74 years	13.0 (9.7–16.3)		16,614	29.1 (24.0–34.2)		37,038	57.9 (52.2–63.6)		73,729
75+ years	5.1 (2.6–7.6)		4,941	27.6 (21.9–33.3)		27,005	67.3 (61.2–73.4)		65,753
Ethnicity									
European/ Pākehā	20.9 (19.1–22.7)	21.7 (19.7–23.7)	242,599	25.3 (23.1–27.5)	24.9 (22.7–27.1)	293,376	53.8 (51.4–56.2)	53.4 (51.0–55.8)	624,722
Māori	52.8 (48.3–57.3)	48.2 (43.5–52.9)	77,552	19.0 (15.9–22.1)	21.9 (18.4–25.4)	27,875	28.2 (24.1–32.3)	29.9 (25.6–34.2)	41,315
Pacific	21.0 (16.3–25.7)	19.2 (14.5–23.9)	13,917	13.8 (9.7–17.9)	13.1 (8.8–17.4)	9,175	65.2 (59.5–70.9)	67.7 (61.6–73.8)	43,335
Other	5.5 (2.0–9.0)	5.3 (1.4–9.2)	4,094	11.2 (3.9–18.5)	16.6 (4.8–28.4)	8,315	83.3 (75.5–91.1)	78.1 (66.3–89.9)	61,762

* Adjusted rates are adjusted for age.

Note: For further explanation of Tables, see Appendix 2: Notes to Figures and Tables.

Table 7: Reported number of cigarettes smoked among smokers, by sociodemographic variables: percent (95% confidence intervals)

	1–10 cigarettes per day			11–20 cigarettes per day			21+ cigarettes per day		
	%		Pop est	%		Pop est	%		Pop est
	(95% CI)			(95% CI)			(95% CI)		
	Unadj	Adj*		Unadj	Adj*		Unadj	Adj*	
Total	43.8 (40.9–46.7)		305,716	43.4 (40.3–46.5)		302,637	12.8 (10.6–15.0)		89,119
15–24 years	60.7 (53.1–68.3)	60.9 (53.3–68.5)	86,510	33.3 (25.7–40.9)	33.2 (25.6–40.8)	47,489	5.9 (2.8–9.0)	5.9 (2.8–9.0)	8,455
25–44 years	39.7 (35.6–43.8)	39.7 (35.6–43.8)	137,626	47.9 (43.6–52.2)	47.9 (43.6–52.2)	165,949	12.4 (9.5–15.3)	12.4 (9.5–15.3)	43,110
45–64 years	34.2 (28.9–39.5)	34.2 (28.9–39.5)	54,120	45.6 (39.9–51.3)	45.7 (40.0–51.4)	72,181	20.2 (15.1–25.3)	20.1 (15.0–25.2)	32,059
65+ years	55.0 (45.6–64.4)	54.4 (44.6–64.2)	27,460	34.1 (25.1–43.1)	34.6 (25.2–44.0)	17,017	11.0 (5.5–16.5)	11.0 (5.5–16.5)	5,495
Males									
Total	37.7 (33.6–41.8)	37.7 (33.6–41.8)	136,212	45.2 (40.5–49.9)	45.2 (40.5–49.9)	163,264	17.1 (13.8–20.4)	17.0 (13.7–20.3)	61,653
15–24 years	55.3 (43.1–67.5)		36,345	37.1 (24.8–49.4)		24,371	7.6 (2.9–12.3)		4,975
25–44 years	32.7 (27.0–38.4)		60,263	50.6 (44.1–57.1)		93,189	16.7 (11.8–21.6)		30,781
45–64 years	31.0 (23.4–38.6)		25,675	41.5 (33.1–49.9)		34,396	27.4 (19.0–35.8)		22,717
65+ years	49.0 (34.9–63.1)		13,928	39.8 (25.9–53.7)		11,309	11.2 (3.8–18.6)		3,180
Females									
Total	50.4 (46.5–54.3)	50.4 (46.5–54.3)	169,504	41.4 (37.7–45.1)	41.5 (37.8–45.2)	139,373	8.2 (6.0–10.4)	8.1 (5.9–10.3)	27,466
15–24 years	65.4 (56.2–74.6)		50,166	30.1 (21.3–38.9)		23,118	4.5 (0.4–8.6)		3,480
25–44 years	47.6 (42.3–52.9)		77,363	44.8 (39.5–50.1)		72,760	7.6 (5.1–10.1)		12,329
45–64 years	37.6 (30.2–45.0)		28,445	50.0 (42.6–57.4)		37,786	12.4 (7.3–17.5)		9,342
65+ years	62.8 (51.4–74.2)		13,531	26.5 (16.7–36.3)		5,709	10.7 (2.7–18.7)		2,315
Ethnicity									
European/ Pākehā	39.9 (36.4–43.4)	40.3 (36.6–44.0)	203,482	46.0 (42.1–49.9)	46.0 (42.1–49.9)	234,684	14.2 (11.5–16.9)	13.7 (11.0–16.4)	72,221
Māori	48.1 (43.0–53.2)	47.3 (42.2–52.4)	64,543	41.4 (36.3–46.5)	40.8 (35.7–45.9)	55,657	10.5 (7.8–13.2)	11.8 (8.7–14.9)	14,076
Pacific	68.0 (59.2–76.8)	65.3 (54.5–76.1)	24,892	25.9 (17.1–34.7)	29.5 (18.5–40.5)	9,491	6.1 (2.8–9.4)	5.2 (2.1–8.3)	2,226
Other	79.0 (63.9–94.1)	81.3 (67.6–95.0)	12,799	17.3 (3.4–31.2)	16.3 (3.2–29.4)	2,805	3.7 (0.0–9.2)	2.4 (0.0–5.9)	595
NZDep96 score									
1 (least deprived)	47.5 (39.5–55.5)	48.5 (40.5–56.5)	60,084	41.4 (32.8–50.0)	41.1 (32.7–49.5)	52,380	11.2 (6.3–16.1)	10.4 (5.9–14.9)	10,121
2	37.3 (30.0–44.6)	38.0 (30.6–45.4)	59,862	46.2 (38.6–53.8)	45.5 (37.7–53.3)	74,127	16.4 (10.9–21.9)	16.5 (10.8–22.2)	19,748
3	43.0 (37.1–48.9)	43.1 (37.2–49.0)	69,965	45.5 (39.0–52.0)	45.1 (38.8–51.4)	73,893	11.5 (7.6–15.4)	11.8 (7.7–15.9)	14,643
4 (most deprived)	46.7 (43.0–50.4)	45.5 (42.0–49.0)	115,806	41.2 (37.3–45.1)	42.0 (38.3–45.7)	102,236	12.1 (9.4–14.8)	12.6 (9.7–15.5)	26,836
Family income									
0–\$20,000	46.4 (41.5–51.3)	44.8 (38.7–50.9)	63,467	40.5 (35.8–45.2)	41.8 (36.1–47.5)	55,466	13.1 (9.6–16.6)	13.4 (9.3–17.5)	17,959
\$20,001–\$30,000	41.7 (34.8–48.6)	40.3 (33.2–47.4)	40,667	43.5 (36.6–50.4)	45.2 (37.8–52.6)	42,388	14.8 (9.5–20.1)	14.5 (9.2–19.8)	14,429
\$30,001–\$50,000	46.3 (39.4–53.2)	49.0 (41.7–56.3)	65,685	42.3 (35.4–49.2)	40.1 (33.0–47.2)	60,130	11.4 (7.7–15.1)	10.8 (7.3–14.3)	16,187
\$50,001+	40.0 (33.3–46.7)	42.5 (35.4–49.6)	70,164	45.0 (37.9–52.1)	44.4 (37.0–51.8)	79,084	15.0 (9.3–20.7)	13.1 (8.0–18.2)	26,377
Education									
No qualifications	39.3 (35.2–43.4)	38.2 (33.9–42.5)	102,586	45.1 (40.6–49.6)	45.9 (41.2–50.6)	117,688	15.7 (12.0–19.4)	15.9 (12.2–19.6)	40,902
School or post- school only	43.4 (38.5–48.3)	39.8 (35.1–44.5)	112,578	44.6 (39.5–49.7)	47.7 (42.4–53.0)	115,679	12.0 (8.9–15.1)	12.5 (8.8–16.2)	30,994
School and post- school	51.4 (45.1–57.7)	52.7 (46.0–59.4)	90,448	38.9 (32.8–45.0)	38.1 (31.6–44.6)	68,507	9.7 (5.6–13.8)	9.2 (5.5–12.9)	17,096

* Adjusted rates are adjusted for age and sex, except when they are age-specific in which case they are adjusted only for sex, or when they are sex-specific, in which case they are adjusted only for age.

Note: For further explanation of Tables, see Appendix 2: Notes to Figures and Tables.

Table 8: 'Quitting status' of smokers, by age, sex and ethnicity: percent (95% confidence intervals)

	No thoughts of quitting or need to consider some day		Should quit but not quite ready		Thinking about or doing things that will help quit	
	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)	% (95% CI)
	Unadj	Adj*	Unadj	Adj*	Unadj	Adj*
Total	42.6 (39.7–45.5)		35.1 (32.2–38.0)		22.3 (19.8–24.8)	
15–24 years	39.5 (32.1–46.9)	39.4 (32.0–46.8)	31.5 (24.8–38.2)	31.6 (24.9–38.3)	29.0 (21.9–36.1)	29.0 (21.9–36.1)
25–44 years	40.7 (36.6–44.8)	40.7 (36.6–44.8)	38.2 (33.9–42.5)	38.2 (33.9–42.5)	21.1 (17.8–24.4)	21.1 (17.8–24.4)
45–64 years	44.7 (38.8–50.6)	44.7 (38.8–50.6)	35.7 (29.8–41.6)	35.7 (29.8–41.6)	19.6 (14.5–24.7)	19.6 (14.7–24.5)
65+ years	58.0 (48.4–67.6)	58.2 (48.4–68.0)	21.5 (12.9–30.1)	21.4 (12.6–30.2)	20.5 (12.9–28.1)	20.4 (12.6–28.2)
Male						
Total	45.7 (41.0–50.4)	45.9 (41.2–50.6)	34.3 (29.8–38.8)	34.2 (29.7–38.7)	20.0 (16.5–23.5)	19.9 (16.4–23.4)
15–24 years	43.5 (31.5–55.5)		28.6 (18.2–39.0)		27.9 (18.1–37.7)	
25–44 years	45.1 (38.6–51.6)		37.6 (30.9–44.3)		17.3 (13.0–21.6)	
45–64 years	44.1 (35.7–52.5)		36.0 (27.4–44.6)		19.9 (11.9–27.9)	
65+ years	59.5 (45.2–73.8)		20.9 (8.2–33.6)		19.6 (8.6–30.6)	
Female						
Total	39.2 (35.5–42.9)	39.2 (35.5–42.9)	35.9 (32.2–39.6)	35.9 (32.2–39.6)	24.8 (21.3–28.3)	24.9 (21.4–28.4)
15–24 years	36.1 (27.5–44.7)		34.0 (25.2–42.8)		30.0 (20.0–40.0)	
25–44 years	35.7 (30.8–40.6)		38.9 (33.8–44.0)		25.4 (20.7–30.1)	
45–64 years	45.4 (37.6–53.2)		35.3 (26.9–43.7)		19.3 (13.2–25.4)	
65+ years	56.0 (43.8–68.2)		22.3 (11.9–32.7)		21.7 (11.5–31.9)	
Ethnicity						
European/ Pākehā	40.2 (36.5–43.9)	39.7 (36.0–43.4)	36.0 (32.3–39.7)	36.2 (32.5–39.9)	23.7 (20.6–26.8)	24.0 (20.7–27.3)
Māori	48.5 (43.6–53.4)	48.4 (43.3–53.5)	31.8 (26.9–36.7)	32.3 (27.2–37.4)	19.7 (16.0–23.4)	19.3 (15.6–23.0)
Pacific	45.0 (36.0–54.0)	51.2 (41.4–61.0)	33.8 (25.4–42.2)	29.5 (21.7–37.3)	21.2 (14.7–27.7)	19.3 (12.6–26.0)
Other	63.5 (42.7–84.3)	70.3 (51.7–88.9)	33.5 (13.1–53.9)	25.7 (8.1–43.3)	3.0 (0.0–6.5)	4.0 (0.0–9.3)

* Adjusted rates are adjusted for age and sex, except when they are age-specific, in which case they are adjusted only for sex, or when they are sex-specific, in which case they are adjusted only for age.

Note: For further explanation of tables, see Appendix 2: Notes to Figures and Tables.

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