

Cannabis Use 2012/13

New Zealand Health Survey



New Zealand Health Survey

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Foreword

The 2012/13 New Zealand Health Survey (NZHS) provides valuable information about cannabis use by adults aged 15+ years. It builds upon and adds value to the findings of the 2007/08 New Zealand Alcohol and Drug Use Survey report on cannabis.

This report presents information on cannabis use in New Zealand, including patterns of use, drug-driving, harms from use (productivity and learning, and mental health), legal problems, and cutting down and seeking help. Information on the medicinal use of cannabis is also presented.

This report seeks to meet the information needs identified during stakeholder workshops. The findings will support the development of policy and intersectoral decision-making on the best way to prevent and reduce the harm and risks associated with cannabis misuse. As such, this report will be of interest to government agencies and Crown organisations, non-government agencies, researchers, the education sector, industry and the public.

I would like to acknowledge and thank the people who gave their time to take part in the 2012/13 NZHS.

I invite any feedback on the content, relevance and direction of this publication. Please direct feedback via the link presented at the end of the key findings.

Don Gray
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Authors

This report was written by Martin Woodbridge, with statistical analysis undertaken by Matt Cronin. Input into the report was also provided by Denise Hutana and Jackie Fawcett (Health and Disability Intelligence, Ministry of Health).

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The NZHS is developed by the New Zealand Health Survey team in the Health and Disability Intelligence Group, Ministry of Health, with advice from the Ministry of Health Survey Governance Group, and is conducted by CBG Health Research Ltd.

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Cannabis use 2012/13: Key findings

Patterns of cannabis use

Eleven percent of adults aged 15 years and over reported using cannabis in the last 12 months (defined here as cannabis users). Cannabis was used by 15% of men and 8.0% of women. Māori adults and adults living in the most deprived areas were more likely to report using cannabis in the last 12 months. Thirty-four percent of cannabis users reported using cannabis at least weekly in the last 12 months. Male cannabis users were more likely to report using cannabis at least weekly in the last 12 months.

Cannabis and driving

Thirty-six percent of cannabis users who drove in the past year reported driving under the influence of cannabis in the last 12 months. Men were more likely to have done so.

Cannabis-related learning and productivity harms

Six percent of cannabis users reported harmful effects on work, studies or employment opportunities, 4.9% reported difficulty learning, and 1.7% reported absence from work or school in the last 12 months due to cannabis use.

Cannabis and mental health harms

Eight percent of cannabis users reported a time in the last 12 months that cannabis use had a harmful effect on their mental health. Younger cannabis users (aged 25–34 years) were most affected, with reported harm to mental health decreasing markedly by age 55+ years.

Cannabis and legal problems

Two percent (2.1%) of cannabis users reported experiencing legal problems because of their use in the last 12 months.

Cutting down and help to reduce cannabis use

Most cannabis users (87%) did not report any concerns from others about their use. Seven percent of cannabis users reported that others had expressed concern about their drug use or had suggested cutting down drug use within the last 12 months. Of cannabis users, 1.2% had received help to reduce their level of drug use in the last 12 months. Few cannabis users who wanted help did not get it (3.6%).

Cannabis use for medicinal purposes

Forty-two percent of cannabis users reported medicinal use (ie, to treat pain or another medical condition) in the last 12 months. Rates were similar for men and women. Older cannabis users (aged 55+ years) reported higher rates of medicinal use.

Methods

Analysis and reporting

This report presents findings from the 2012/13 New Zealand Health Survey (2012/13 NZHS) alcohol and drug module about reported cannabis use in the last 12 months (2012/13) by adults aged 15+ years. Data is analysed by sex and age group, and, where possible, by ethnic group and neighbourhood deprivation (NZDep2013; more information is available online at: www.health.govt.nz/publication/nzdep2013-index-deprivation). NZDep2013 quintiles are reported as adults living in the most or least deprived 20% of small areas.

All results presented in this report are weighted so that they are representative of the total adult population (those aged 15 years and over). This report uses total response ethnicity to define ethnic groups and to classify a person in all ethnic groups they identify with. This means that people can appear in more than one ethnic group. Population estimates have been given for some analyses, reflecting the estimated number of people in the total population aged 15+ years. Due to small sample sizes, the data for older age groups (aged 55+ years) has been presented in an aggregated form. Data tables give prevalence estimates rounded to one decimal place if less than 5% and to whole numbers if greater than or equal to 5%.

Ninety-five percent confidence intervals have been used to quantify the sample errors. Adjusted rate ratios have been used to compare different population groups in order to determine how many times larger or smaller the rate is for a group of interest (greater than 1 is more likely, 1 is as likely, and less than 1 is less likely). Data tables containing rates (with confidence intervals) and adjusted rate ratios can be found in the appendix.

Sample size

The 2012/13 NZHS interviewed 13,000 adults aged 15+ years, and found that 1415 adults had used cannabis in the last 12 months. Most of this report is based on this group. For some questions the participant sample size was too small to present reliable results. Therefore, data has only been presented when the sample size in the numerator and denominator was at least 5 and 30 adults respectively.

Data collection

The 2012/13 NZHS data was collected from July 2012 to June 2013 in face-to-face interviews conducted in people's homes. Data for cannabis use was collected using an audio computer-assisted self-interview (A-CASI).

For more information on the 2012/13 NZHS survey methodology, see: www.health.govt.nz/publication/new-zealand-health-survey-methodology-report-2012-13

For more information on the cannabis and other drug use component of the 2012/13 NZHS, see: www.health.govt.nz/publication/new-zealand-health-survey-content-guide-and-questionnaires-2012-13

Patterns of cannabis use

Cannabis is the most commonly used illicit drug worldwide and in New Zealand (UNODC 2014). People who use cannabis do so for a variety of reasons (eg, pleasure seeking or medicinal use) (Green, Kavanagh et al. 2003, Noller 2007). At low doses cannabis induces feelings of relaxation and a mild euphoria (Green, Kavanagh et al. 2003, Grotenhermen 2003).

Cannabis: a widely used illegal drug

In 2012/13, 42% of adults aged 15+ years reported they had used cannabis at some point in their lifetime.

Adults were asked if they had used cannabis in the last 12 months.

Box 1: Cannabis use by adults in the last 12 months

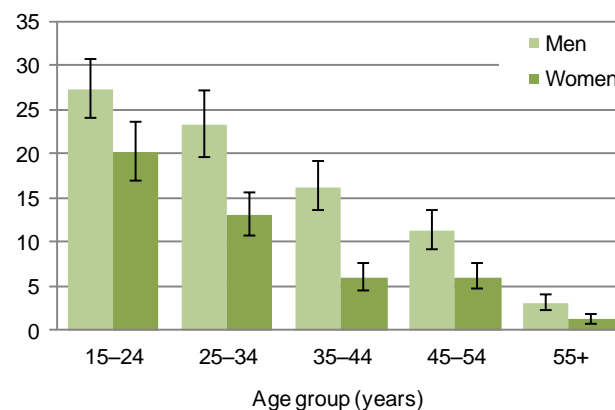
11% of adults reporting using cannabis in the last 12 months. This equates to around 397,000 adults.

Adjusted rate ratio: used cannabis in last 12 months

Men vs women	1.8 *
Māori vs non-Māori	2.2 *
Māori men vs non-Māori men	2.1 *
Māori women vs non-Māori women	2.3 *
Pacific vs non-Pacific	0.6 *
Asian vs non-Asian	0.2 *
Most vs least deprived	1.8 *

* Statistically significant difference between the two groups.

Percent of adults who used cannabis in the last 12 months



Eleven percent of adults reported using cannabis in the past year

Eleven percent of adults reported using cannabis at least once in the last 12 months (hereafter described as cannabis users). This equates to around 397,000 adults. Fifteen percent of men and 8.0% women reported past-year use. Men were 1.8 times more likely to have reported using cannabis than women, after adjusting for age differences. Past-year use was highest among youth (15–24 years), and decreased with increasing age for both genders (Box 1).

Māori men and women report higher rates of past-year cannabis use than non- Māori men and women

Twenty-five percent of Māori reported using cannabis in the last 12 months, compared with 11% of European/Others, 9% of Pacific people and 2.9% of Asians. Māori were 2.2 times more likely to report using cannabis in the last 12 months than non-Māori, after adjusting for age and sex differences. Māori men (32%) and women (19%) reported high rates of past-year cannabis use. Māori men were 2.1 times more likely than non-Māori men and Māori women were 2.3 times more likely than non-Māori women to have used cannabis in the last 12 months, after adjusting for age differences.

Adults living in the most deprived areas more likely to report past-year cannabis use

The rates of reported past-year cannabis use were higher among adults living in the most deprived areas (16%) compared with adults living the least deprived areas (8%). Adults living in the most deprived areas were 1.8 times more likely to report using cannabis in the last 12 months than those who lived in the least deprived areas, after adjusting for age, sex and ethnic differences (Box 1).

One in three cannabis users used cannabis at least weekly

Cannabis users were asked how often they used cannabis in the last 12 months.

Box 2: Cannabis users who used cannabis at least weekly in the last 12 months

34% of cannabis users reported using cannabis at least weekly in the last 12 months.

Adjusted rate ratio: used cannabis in last 12 months	
Men vs women	1.3 *
Māori vs non-Māori	1.5 *
Māori men vs non-Māori men	1.3 *
Māori women vs non-Māori women	1.9 *
Pacific vs non-Pacific	0.8
Most vs least deprived	2.3 *

* Statistically significant difference between the two groups.

Percent of cannabis users who used cannabis at least weekly in the last 12 months

Age group (years)	Men (%)	Women (%)
15-24	35	22
25-34	33	33
35-44	40	39
45-54	44	36
55+	45	35

Male cannabis users more likely to report using cannabis at least weekly

Thirty-four percent of cannabis users reported using cannabis at least weekly in the last 12 months. Male cannabis users (38%) reported higher rates of at least weekly use than female cannabis users (29%). Male cannabis users were 1.3 times more likely to report using cannabis at least weekly than female cannabis users, after adjusting for age differences (Box 2). The use of cannabis weekly increased with increasing age (29% of 15–24 year-olds and 42% of 55+ year-olds). Younger men (aged 15–24 years) and older men (aged 45+ years) reported higher rates of at least weekly cannabis use than female cannabis users. Between the ages of 25 and 44 years there was only slight variation in reported at least weekly cannabis use by sex (Box 2).

Whereas younger adults (aged 15–34 years) report high rates of cannabis use (Box 1), among cannabis users older adults (aged 35+ years) report more frequent use (Box 2).

Māori more likely to report at least weekly cannabis use

Forty-five percent of Māori reported using cannabis at least weekly in the last 12 months compared with 32% of European/Others and 29% of Pacific people. Māori cannabis users were 1.5 times more likely to report weekly use of cannabis than non-Māori cannabis users, after adjusting for age and sex differences (Box 2). Both Māori male (45%) and Māori female (45%) cannabis users reported high rates of use. Māori women were 1.9 times more likely than non-Māori women, and Māori men were 1.3 times more likely than non-Māori men, to have used cannabis at least weekly in the last 12 months, after adjusting for age differences.

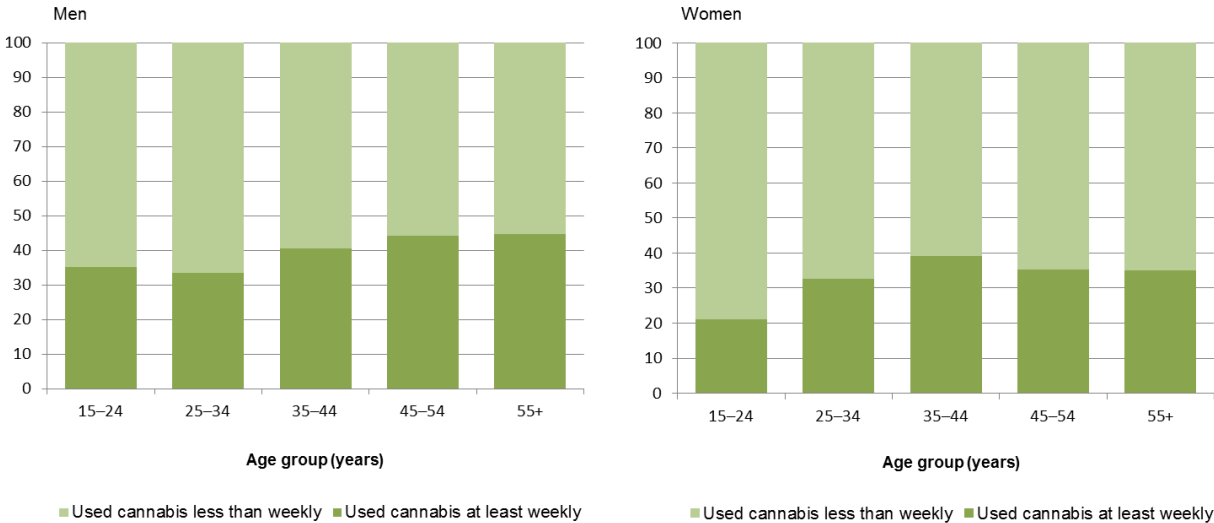
Adults living in the most deprived areas more likely to report at least weekly cannabis use

The reported rate of using cannabis at least weekly in the last 12 months was higher among adults living in the most deprived areas (45%) compared with cannabis users living in the least deprived areas (20%). Cannabis users living in the most deprived areas were 2.5 times more likely to report using cannabis at least weekly than those who lived in the least deprived areas, after adjusting for age, sex and ethnic differences (Box 2).

Most cannabis users used cannabis less than weekly

Among adults who used cannabis in the last 12 months, the majority reported using cannabis less than weekly. This was the case for all age and sex groups (Figure 1).

Figure 1: Percentage of cannabis users who used cannabis in the last 12 months, by frequency of use, by sex, by age



Source: 2012/13 New Zealand Health Survey

Note: 'at least weekly use' is categorised as daily or almost daily/weekly use, and 'less than weekly use' is categorised as monthly/every few months/once or twice in last 12 months.

Profile of cannabis use in the last 12 months

Using cannabis in the last 12 months was reported most by young adults (aged 15–24 years), men, those of Māori ethnicity, and adults living in the most deprived areas. Not using cannabis in the last 12 months was reported most by adults aged 25–54 years, and those of Māori ethnicity. There was little variation by both sex and deprivation. Never using cannabis was reported most by women, adults aged 55+ years, and those of Asian ethnicity. There was slight variation by deprivation.

Table 1: Percentage of adults who used cannabis in the last 12 months, who did not use cannabis in the last 12 months, and who never used cannabis, by socio-demographic categories

Sex	Used cannabis in last 12 months			Adults who did not use cannabis in last 12 months (%)	Adults who never used cannabis (%)
	Frequency of cannabis use by adults		Adults who used cannabis at least once in last 12 months (%)		
	At least weekly (%)	Less than weekly (%)			
Total	3.8	7	11	31	58
Men	5	9	15	31	55
Women	2.3	6	8	30	62
Age group					
15–24	7	17	24	20	56
25–34	6	12	18	39	43
35–44	4.3	6	11	44	46
45–54	3.5	5	8	42	49
55+	0.8	1.1	2	19	79
Ethnic group					
Māori	11	14	25	40	36
Pacific	2.4	6	9	25	67
Asian	0.7	2	2.9	7.0	90
European/Other	3.6	8	11	34	55
NZDep2013					
Quintile 1	1.6	6	8	32	60
Quintile 2	2.8	6	9	31	59
Quintile 3	2.9	8	11	31	58
Quintile 4	4.5	7	12	29	60
Quintile 5	7	9	16	30	54

Source: 2012/13 New Zealand Health Survey

Note: 'at least weekly use' is categorised as daily or almost daily/weekly use, and 'less than weekly use' is categorised as monthly/every few months/once or twice in last 12 months.

Due to rounding some prevalence estimates do not equate to 100%.

Driving under the influence of cannabis

Driving while under the influence of cannabis, and especially in combination with alcohol, is associated with an increased risk of motor vehicle collisions and related injuries (Ramaekers, Berghaus et al. 2004, Fergusson, Horwood et al. 2008, ESR 2012, Poulsen, Moar et al. 2012).

Cannabis users were asked if in the last 12 months they had driven when feeling under the influence of cannabis.

One-third of cannabis users who drove in past year did so at least once under the influence of cannabis

Box 3: Cannabis users who drove under the influence of cannabis in last 12 months

36% of cannabis users who drove in the past year drove under the influence of cannabis in the last 12 months. This equates to around 133,000 adults.

Adjusted rate ratio: cannabis users who drove under the influence of cannabis in last 12 months

Men vs women	1.5 *
Māori vs non-Māori	1.2
Pacific vs non-Pacific	1.2
Most vs least deprived	1.1

* Statistically significant difference between the two groups.

Percent of cannabis users who drove in past year under the influence of cannabis

Age group (years)	Men (%)	Women (%)
15-24	41	18
25-34	36	38
35-44	49	31
45-54	41	36
55+	35	11

Male cannabis users were more likely to report driving under the influence of cannabis

Thirty-six percent of cannabis users who drove in the past year drove at least once while feeling under the influence of cannabis in the last 12 months. This equates to around 133,000 adults. More male cannabis users (41%) reported driving under the influence than female cannabis users (27%) in the last 12 months. Men were 1.5 times more likely to have driven under the influence of cannabis in the last 12 months than women, after adjusting for age differences (Box 3).

Drug driving was reported across all age groups

Driving under the influence of cannabis at least once in the last 12 months was most prevalent among males aged 35-44 years (49%) (Box 3).

Although there were slight variations between cannabis users who reported driving under the influence of cannabis in the last 12 months by ethnicity and by deprivation, these were not found to be statistically significant, after adjusting for age and sex, and age, sex and ethnic differences, respectively (Box 3).

Harm from cannabis use: learning and productivity

The long-term heavy use of cannabis may cause harm to the brain, including reduced cognitive performance. In particular, the heavy use of cannabis at young ages is associated with an increased risk of educational under-achievement (Lynskey and Hall 2000, Fergusson and Boden 2008, Fergusson and Boden 2011).

Cannabis users were asked about perceived harmful effects from cannabis use in the last 12 months. This section focuses on specific cannabis-related harms to learning and productivity.

Cannabis-related harms to learning and productivity occur at low levels

Box 4: Harmful effects from cannabis use reported by cannabis users in the last 12 months

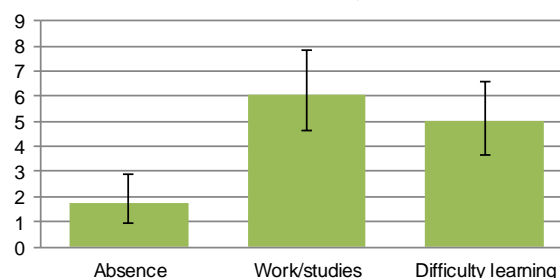
6.0% of cannabis users reported harmful effects on work, studies, or employment, 5.0% reported difficulty learning, and 1.7% reported absence from work or school in the last 12 months due to cannabis use.

Adjusted rate ratio: cannabis users who reported specific harms from cannabis use in the last 12 months

	Work/studies	Learning	Absence
Men vs women	1.6	0.9	2.1
Māori vs non-Māori	2.1*	2.2	1.1
Pacific vs non-Pacific	1.2	1.4	0.9
Most vs least deprived	1.4	3.2	0.6

* Statistically significant difference between the two groups.

Percent of cannabis users who reported specific harmful effects from cannabis use in past year



Among the total population of cannabis users, low rates of cannabis-related harms were reported. Six percent of cannabis users reported harmful effects on work, studies or employment; 4.9% reported difficulty learning; and 1.7% reported absence from work or school at least once in the last 12 months due to cannabis use (Box 4).

Men and women experience harms from cannabis use differently

Seven percent of male and 4.5% of female cannabis users reported harmful effects on work, studies or employment opportunities in the last 12 months due to cannabis use. Five percent of women and 4.7% of men reported difficulty learning in the past year due to cannabis use, and 2.1% of men reported absence from work or school at least once in the last 12 months due to cannabis use (the sample size for women absence was small and is not reported here).

Younger cannabis users more likely to report harmful effects from cannabis use

Younger (aged 15–24 years) cannabis users reported harmful effects on work, studies or employment opportunities (9.0%) more frequently than older (aged 55+ years) cannabis users (3.1%).

Māori cannabis users are more likely to report harmful effects of cannabis use on work, studies or employment opportunities

Among cannabis users, 10% of Māori and 8.0% of Pacific people, compared with 5.0% of European/Others, reported harmful effects on work, studies or employment in the last 12 months due to cannabis use. Māori were 2.1 times more likely to report harmful effects on work, studies or employment opportunities from cannabis use than non-Māori, after adjusting for age and sex differences (Box 4).

Cannabis use and mental health harms

Regular, heavy and abusive use of cannabis, particularly high THC potency cannabis, may increase the risks of symptoms of poor mental health. Among susceptible individuals (eg, with a family history, or patients with existing illness), such cannabis use may bring on symptoms of psychosis, depression and anxiety. Other less extreme effects may include mild paranoia, a short-lived symptom of cannabis intoxication (Iversen 2003, Di Forti, Morgan et al. 2009, Frisher, Crome et al. 2009, Fergusson and Boden 2011).

Cannabis users were asked if in the last 12 months there was a time they felt their cannabis use had a harmful effect on their mental health.

Cannabis use affected the perceived mental health of eight percent of cannabis users

Eight percent of cannabis users reported a time in the last 12 months that cannabis use had a harmful effect on their mental health. Nine percent of male and 7.0% of female cannabis users reported a harmful effect. Harmful effects to mental health were experienced by all age groups. Younger (aged 25–34 years) cannabis users were most affected (10%), with reported harm to mental health decreasing markedly by age 55+ years (3.4%).

Rates of reported mental health harms were similar for Māori (10%), Pacific people (8.0%) and European/Others (8.0%). Rates of reported mental health harms were similar for cannabis users living in the most deprived areas (9%) and those living in the least deprived areas (7%). There was no significant difference by ethnic group or deprivation, after adjusting for age and sex, and age, sex and ethnic differences.

This analysis does not account for frequency of use due to sample size, meaning the data has been presented in an aggregated form.

Cannabis and legal problems

The illegal status of cannabis means there are legal ramifications for possession, use, cultivation, manufacture and supply (New Zealand Parliament 1975). Leading up to the 2012/13 period, in the majority of police drug apprehensions, possession and/or use of cannabis was the largest drug offence class (Statistics New Zealand 2010). Since the late 1990s, there has been a general decline in arrests, prosecutions and convictions for cannabis use in New Zealand. The decline in convictions was partly driven by the police diversion scheme, which now includes low-level cannabis use offences (Wilkins and Sweetsur 2012).

Cannabis users were asked if in the last 12 months there was a time they had legal problems because of their cannabis use. (Note: the type or severity of legal problems is not specified in the NZHS survey question.)

Men were more likely to report experiencing legal problems from their cannabis use

Two percent of cannabis users (2.1%) reported experiencing legal problems from their use in the last 12 months. Legal problems were more prevalent among male (2.6%) than female (1.1%) cannabis users. Men were 2.2 times more likely than women to have experienced legal problems from cannabis use in the last 12 months, after adjusting for age differences. The rate was highest for the 35–44 years age group (3.2%).

Māori were more likely to report experiencing legal problems from their cannabis use

Among cannabis users, 3.4% of Māori compared with 1.9% of European/Others reported legal problems from their cannabis use in the last 12 months. Māori cannabis users were 1.8 times more likely to report legal problems from their use in the past year, after adjusting for age and sex differences.

Cutting down and help to reduce drug use

Talking about drug use in primary health care settings can often be difficult, due to competing demands, time pressures, and topic delicacy (Moriarty, Stubbe et al. 2009, Moriarty, Stubbe et al. 2012). For families living with addiction, raising the issue and talking about it with a family member can also be difficult (Moriarty, Stubbe et al. 2010).

Few cannabis users reported concern from others about their drug use

Cannabis users were asked if a relative or friend, or a doctor or other health care worker, had been concerned about their drug use or had suggested cutting down.

Most cannabis users (87%) did not report concern from others about their use. Seven percent of cannabis users reported that others had expressed concern about their drug use or had suggested cutting down drug use in the last 12 months, and 6.0% reported this occurring at an earlier time.

Concern from others about use or suggesting cutting down drug use in the last 12 months was lower among older cannabis users (3.4% of those aged 55+ years) than among younger cannabis users (8.0% of 15–24-year-olds and 9.0% of 35–44-year-olds).

Few cannabis users reported receiving help to reduce level of drug use

Cannabis users were asked if in the last 12 months they had received help to reduce their level of drug use.

Of cannabis users, 1.2% had received such help.

Few cannabis users who wanted help did not get it

Cannabis users were asked if in the last 12 months they had wanted help to reduce their level of drug use but did not get it.

Of cannabis users, 3.6% had wanted help to reduce their level of drug use in the last 12 months but did not get it.

Cannabis use for medicinal purposes

For centuries cannabis in its various forms has been used for medicinal purposes (Pertwee 2006, Woodbridge 2011). Modern pharmaceutical-grade preparations have allowed advanced studies of cannabinoid drug action in humans to be conducted. Presently, pharmaceutical-grade cannabis preparations are used to treat diseases and disease states including for example neurological disorders (eg, multiple sclerosis), chronic pain, cancer and HIV/AIDS (Grotenhermen 2003, Pertwee 2006, Hazekamp 2007). The use of non-pharmaceutical-grade cannabis for medicinal purposes is not permitted in New Zealand.

Adults were asked if in the last 12 months they had intentionally used cannabis to treat pain or other medical conditions. (Note: this question relates specifically to illicit cannabis.)

Cannabis was used for medicinal purposes by 42% of cannabis users in the past year

Box 5: Used cannabis to treat pain or other medical condition in the last 12 months

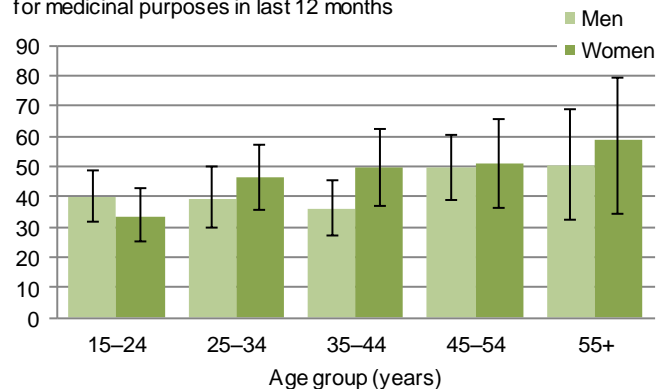
42% of cannabis users reported using cannabis to treat pain or another medical condition in the last 12 months.

Adjusted rate ratio: cannabis users who used cannabis for medicinal purposes

	Medicinal use
Men vs women	1.0
Māori vs non-Māori	1.0
Pacific vs non-Pacific	0.7
Most vs least deprived	1.6*

* Statistically significant difference between the two groups.

Percent of cannabis users who used cannabis for medicinal purposes in last 12 months



Older cannabis users reported high rates of medicinal use

Forty-two percent of cannabis users reported using cannabis to treat pain or another medical condition in the last 12 months (Box 5). About equal percentages of women (43%) and men (41%) reported having done so in the past year. Reported medicinal use increased with increasing age (Box 5). Cannabis users aged 55+ years reported the highest rates of cannabis use for medicinal purposes (58% of females and 51% of males).

European/Others and Māori reported high rates of medicinal use

Forty-three percent of European/Others, 42% of Māori and 31% of Pacific cannabis users reported using cannabis for medicinal purposes to treat pain or another medical condition in the past 12 months. Although there was variation reported by ethnicity, this was not found to be statistically significant after adjusting for age and sex differences (Box 5).

Cannabis users living in areas of high deprivation are more likely to report using cannabis medicinally

There was variability across areas of deprivation among cannabis users who reported using cannabis for medicinal purposes. Forty-seven percent of cannabis users living in areas of high deprivation compared with 34% of cannabis users living in areas of low deprivation reported using cannabis to treat pain or another medical condition in the past 12 months. Cannabis users living in the most deprived areas were 1.6 times more likely to report using cannabis for medicinal purposes in the past year than those who lived in the least deprived areas, after adjusting for age, sex and ethnic differences (Box 5).

Most medicinal use of cannabis is administered by smoking

Cannabis used for medicinal purposes was largely administered by smoking it in the form of a joint (78%), or through a water pipe (35%) or pipe (38%).

Summary of changes from 2007/08

Whereas the 2012/13 NZHS includes adults aged 15 years and over, the 2007/08 alcohol and drug use survey was limited to adults aged 16–64 years. To enable comparisons over time, only statistically significant changes in the patterns of cannabis use by adults aged 16–64 years are reported in this section.

The rates of past year cannabis use by adults aged 16–64 years were similar in 2012/13 (14%) as in 2007/08 (15%). A slight decrease was observed for women (from 11% to 10%), but not for men.

While the observed changes were found to be statistically significant, the change was small and is not considered epidemiologically significant.

Changes over time for other cannabis use statistics were not found to be statistically significant.

Appendix: Tables

Cannabis use

Table A1: Percentage of adults who reported having ever used cannabis, by age and sex

	Percent	Confidence interval
Sex		
Men	46	44–47
Women	38	36–40
Total	42	41–43
Age distribution		
15–24	44	41–47
25–34	57	54–60
35–44	54	51–58
45–54	51	48–53
55+	21	20–22

Table A2: Percentage of adults who reported using cannabis in last 12 months, by socio-demographic categories

	Percent	Confidence interval
Sex		
Men	15	13–16
Women	8	7–9
Total	11	10–12
Age distribution		
15–24	24	22–26
25–34	18	16–20
35–44	11	9–12
45–54	8	7–10
55+	2.0	1.5–2.6
Age distribution men		
15–24	27	24–31
25–34	23	20–27
35–44	16	14–19
45–54	11	9–14
55+	2.9	2.1–4.0
Age distribution women		
15–24	20	17–24
25–34	13	11–16
35–44	6	4.5–8
45–54	6.0	4.7–8
55+	1.2	0.7–1.8
Ethnic group		
Māori	25	23–27
Pacific	9.0	7–12
Asian	2.9	1.6–4.9
European/Others	11	10–12
Ethnic group men		
Māori	32	28–36
Pacific	15	10–21
Asian	3.7	1.6–7
European/Others	15	13–16
Ethnic group women		
Māori	19	17–21
Pacific	3.9	2.2–6
Asian	2.1	0.9–4.2
European/Others	8	7–9
NZDep2013		
Quintile 1	8	6–10
Quintile 2	9	8–11
Quintile 3	11	9–12
Quintile 4	12	10–14
Quintile 5	16	14–19

Cannabis use: at least weekly and less than weekly use

Table A3: Percentage of cannabis users who reported using cannabis ‘at least weekly’ and ‘less than weekly’ in last 12 months, by socio-demographic categories

	At least weekly use		Less than weekly use	
	Percent	Confidence interval	Percent	Confidence interval
Sex				
Men	38	34–42	62	58–66
Women	29	24–34	71	66–76
Total	34	31–38	66	62–69
Age distribution				
15–24	29	24–35	71	65–76
25–34	33	27–40	67	60–73
35–44	40	33–48	60	52–67
45–54	41	33–49	59	51–67
55+	42	31–53	58	47–69
Age distribution men				
15–24	35	28–43	65	57–72
25–34	33	25–43	67	57–75
35–44	40	32–50	60	50–68
45–54	44	34–55	56	45–66
55+	45	32–60	55	40–68
Age distribution women				
15–24	21	15–29	79	71–85
25–34	33	23–44	67	56–77
35–44	39	26–54	61	46–74
45–54	35	24–48	65	52–76
55+	35	15–62	65	38–85
Ethnic group				
Māori	45	40–50	55	50–60
Pacific	29	18–43	71	57–82
European/Others	32	29–36	68	64–71
Ethnic group men				
Māori	45	38–51	55	49–62
Pacific	33	18–52	67	48–82
European/Others	37	32–42	63	58–68
Ethnic group women				
Māori	45	38–52	55	48–62
Pacific	–	–	–	–
Euro/Other	24	19–31	76	69–81
NZDep2013				
Quintile 1	20	13–30	80	70–87
Quintile 2	31	24–38	69	62–76
Quintile 3	28	21–36	72	64–79
Quintile 4	40	32–49	60	51–68
Quintile 5	45	40–50	55	50–60

Note: ‘at least weekly use’ is categorised as daily or almost daily/weekly use, and ‘less than weekly use’ is categorised as monthly/every few months/once or twice in last 12 months.

Table A4: Adjusted rate ratio: cannabis users who reported using cannabis ‘at least weekly’ and ‘less than weekly’ in last 12 months

Comparator group	At least weekly use	Less than weekly use
	Adjusted rate ratio	Adjusted rate ratio
Men vs women	1.3 *	0.9 *
Māori vs non-Māori	1.5 *	0.8 *
Māori men vs non-Māori men	1.3 *	0.8 *
Māori women vs non-Māori women	1.9 *	0.7 *
Pacific vs non-Pacific	0.8	1.1
Most vs least deprived	2.3 *	0.7 *

* Statistically significant difference between the two groups.

Note: ‘at least weekly use’ is categorised as daily or almost daily/weekly use, and ‘less than weekly use’ is categorised as monthly/every few months/once or twice in last 12 months.

Profile of cannabis use in the last 12 months

Table A5: Percentage of adults who used cannabis at least once in the last 12 months, who did not use cannabis in the last 12 months, and who had never used cannabis, by socio-demographic categories

	Used at least once in last 12 months		Did not use cannabis in last 12 months		Never used cannabis	
	Percent	Confidence interval	Percent	Confidence interval	Percent	Confidence interval
Sex						
Total	11	10–12	31	30–32	58	57–60
Men	15	13–16	31	30–33	55	53–56
Women	8	7–9	30	29–31	62	61–64
Age group						
15–24	24	22–26	20	18–22	56	54–59
25–34	18	16–20	39	36–42	43	40–46
35–44	11	9–12	44	40–47	46	43–49
45–54	8	7–10	42	40–45	49	47–52
55+	2.0	1.5–2.6	19	18–20	79	78–81
Ethnic group						
Māori	25	23–27	40	37–42	36	33–38
Pacific	9.0	7–12	25	21–30	67	62–71
Asian	2.9	1.6–4.9	7	6–9	90	87–92
European/Other	11	10–12	34	33–35	55	54–56
NZDep2013						
Quintile 1	8	6–10	32	28–36	60	56–64
Quintile 2	9	8–11	31	29–34	59	56–63
Quintile 3	11	9–12	31	28–34	58	55–61
Quintile 4	12	10–14	29	26–31	60	57–63
Quintile 5	16	14–19	30	28–32	54	52–57

Note: Due to rounding some prevalence estimates do not equate 100%.

Table A6: Adjusted rate ratio: adults who used cannabis at least once in the last 12 months, who did not use cannabis in the last 12 months, and who had never used cannabis

Comparator group	Used at least once in last 12 months	Did not use cannabis in last 12 months	Never used cannabis
	Adjusted rate ratio	Adjusted rate ratio	Adjusted rate ratio
Men vs women	1.8 *	1.0	0.9 *
Māori vs non-Māori	2.2 *	1.3 *	0.6 *
Māori men vs non-Māori men	2.1 *	1.2*	0.6 *
Māori women vs non-Māori women	2.3 *	1.4 *	0.7 *
Pacific vs non-Pacific	0.6 *	0.8 *	1.2 *
Asian vs non-Asian	0.2 *	0.2 *	1.7 *
Most vs least deprived	1.8 *	0.9	0.9

* Statistically significant difference between the two groups.

Table A7: Percentage of adults who used cannabis in the last 12 months ‘at least weekly’ and ‘less than weekly’, by socio-demographic categories

	Used at least weekly		Used less than weekly	
	Percent	Confidence interval	Percent	Confidence interval
Sex				
Total	3.8	3.4–4.2	7	7–8
Men	5	4.7–6	9	8–10
Women	2.3	1.8–2.8	6	4.9–6
Age group				
15–24	7	6–8	17	15–19
25–34	6	4.7–7	12	10–14
35–44	4.3	3.4–5	6	5–8
45–54	3.5	2.8–4.3	5	3.9–6
55+	0.8	0.6–1.2	1.1	0.8–1.6
Ethnic group				
Māori	11	10–13	14	12–16
Pacific	2.4	1.4–4.0	6.0	4–9
Asian	0.7	0.2–1.7	2.0	0.9–3.8
European/Other	3.6	3.1–4.1	8	7–8
NZDep2013				
Quintile 1	1.6	0.9–2.5	6	4.5–9
Quintile 2	2.8	2–3.9	6	5–8
Quintile 3	2.9	2.1–4	8	6–9
Quintile 4	4.5	3.5–6	7	6–9
Quintile 5	7	6–9	9	8–10

Note: ‘at least weekly use’ is categorised as daily or almost daily/weekly use, and ‘less than weekly use’ is categorised as monthly/every few months/once or twice in last 12 months.

Due to rounding some prevalence estimates do not equate 100%.

Table A8: Adjusted rate ratio: adults who used cannabis in the last 12 months ‘at least weekly’ and ‘less than weekly’

Comparator group	At least weekly use Adjusted rate ratio	Less than weekly use Adjusted rate ratio
Men vs women	2.3 *	1.5 *
Māori vs non-Māori	3.4 *	1.7 *
Māori men vs non-Māori men	2.8 *	1.8 *
Māori women vs non-Māori women	4.9 *	1.6 *
Pacific vs non-Pacific	0.5 *	0.6 *
Asian vs non-Asian	0.1 *	0.2 *
Most vs least deprived	4.3 *	1.2

* Statistically significant difference between the two groups.

Note: ‘at least weekly use’ is categorised as daily or almost daily/weekly use, and ‘less than weekly use’ is categorised as monthly/every few months/once or twice in last 12 months.

Driving under the influence of cannabis

Table A9: Percentage of cannabis users who drove in the last 12 months and reported driving under the influence of cannabis in last 12 months, by socio-demographic categories

	Percent	Confidence interval
Sex		
Men	41	35–46
Women	27	21–34
Total	36	32–40
Age distribution		
15–24	32	26–40
25–34	36	29–44
35–44	44	36–52
45–54	39	31–49
55+	28	14–48
Age distribution men		
15–24	41	32–51
25–34	35	26–46
35–44	49	39–58
45–54	41	31–53
55+	35	17–60
Age distribution women		
15–24	19	12–28
25–34	37	26–50
35–44	31	20–45
45–54	36	19–56
55+	11	3.5–32
Ethnic group		
Māori	41	35–48
Pacific	44	28–61
European/Others	34	30–39
NZDep2013		
Quintile 1	35	24–47
Quintile 2	35	24–48
Quintile 3	36	27–45
Quintile 4	32	24–42
Quintile 5	40	33–47

Cannabis-related learning and productivity harms

Table A10: Percentage of cannabis users who reported harmful effects on work, studies, or employment opportunities in last 12 months because of cannabis use, by socio-demographic categories

	Percent	Confidence interval
Sex		
Men	7	5–9
Women	4.5	2.5–8
Total	6.0	4.6–8
Age distribution		
15–24	9	6–13
25–34	6	3.8–9
35–44	3.2	1.3–7
45–54	3.5	1.6–7
55+	3.1	0.5–10
Ethnic group		
Māori	10	7–14
Pacific	8	3.6–17
European/Others	5	3.6–7
NZDep2013		
Quintile 1	2.7	0.6–7
Quintile 2	6	2.8–13
Quintile 3	5	2.6–10
Quintile 4	8	4.7–12
Quintile 5	7	5–10

Table A11: Percentage of cannabis users who reported difficulty learning in last 12 months because of cannabis use, by socio-demographic categories

	Percent	Confidence interval
Sex		
Men	4.7	3.2–7
Women	5	3.4–8
Total	4.9	3.6–7
Age distribution		
15–24	5	3.2–9
25–34	4.7	2.6–8
35–44	4.8	2.6–8
45–54	5	2.9–9
55+	3.7	0.9–10
Ethnic group		
Māori	8	6–12
Pacific	–	–
European/Others	4.2	2.8–6
NZDep2013		
Quintile 1	2.3	0.4–7
Quintile 2	3.2	1.2–7
Quintile 3	3.5	1.2–8
Quintile 4	7	4–11
Quintile 5	7	5–10

Table A12: Percentage of cannabis users who reported being absent (at least once) from work or school in last 12 months because of cannabis use, by sex

Sex	Percent	Confidence interval
Men	2.1	1.1–3.5
Women	1	0.1–3.5
Total	1.7	1–2.8

Cannabis and mental health harms

Table A13: Percentage of cannabis users who reported harmful effects on mental health in last 12 months because of cannabis use, by socio-demographics

	Percent	Confidence interval
Sex		
Men	9	7–11
Women	7	4.8–11
Total	8	7–10
Age distribution		
15–24	8	6–13
25–34	10	7–15
35–44	8	4.5–13
45–54	8	4.2–14
55+	3.4	1–8
Ethnic group		
Māori	10	7–13
Pacific	8	3.0–20
European/Others	8	6–10
NZDep2013		
Quintile 1	7	2.9–15
Quintile 2	10	6–17
Quintile 3	6	3.3–11
Quintile 4	9	6–13
Quintile 5	9	6–12

Table A14: Adjusted rate ratio: cannabis users who reported harmful effects on mental health in last 12 months because of cannabis use

Comparator group	Adjusted rate ratio
Men vs women	1.3
Māori vs non-Māori	1.3
Pacific vs non-Pacific	0.9
Most vs least deprived	1.0

* Statistically significant difference between the two groups.

Cannabis and legal problems

Table A15: Percentage of cannabis users who reported experiencing legal problems because of cannabis use in last 12 months, by socio-demographic categories

	Percent	Confidence interval
Sex		
Men	2.6	1.6–3.9
Women	1.1	0.5–2.1
Total	2.1	1.4–3
Age distribution		
15–24	1.5	0.7–2.9
25–34	2.2	1.1–4.1
35–44	3.2	1.2–7
45–54	1.7	0.4–4.4
55+	2.3	0.3–8
Ethnic group		
Māori	3.4	2.0–5
Pacific	1.5	0–8
European/Others	1.9	1.1–3.0

Table A16: Adjusted rate ratio: cannabis users who reported legal problems because of cannabis use in last 12 months

Comparator group	Adjusted rate ratio
Men vs women	2.2 *
Māori vs non-Māori	1.8 *

* Statistically significant difference between the two groups.

Table A17: Percentage of cannabis users who reported someone being concerned about drug use or suggested cutting down: never, in last 12 months, or at an earlier time

Concern from others	Percent	Confidence interval
Yes, in past 12 months	7	5.0–9.0
Yes, but not in past 12 months	6	4.9–8.0
Never	87	84–89

Table A18: Percentage of cannabis users who reported someone being concerned about their drug use or suggested cutting down in last 12 months, by age and sex

	Percent	Confidence interval
Sex		
Men	8	6–11
Women	5	3.3–8
Total	7	5–9
Age distribution		
15–24	8	4.8–12
25–34	7	4.2–10
35–44	9	5–14
45–54	4.8	2.0–10
55+	3.4	1–8

Table A19: Adjusted rate ratio: cannabis users who reported someone being concerned about their drug use or suggested cutting down in last 12 months

Comparator group	Adjusted rate ratio
Men vs women	1.5

* Statistically significant difference between the two groups.

Table A20: Percentage of cannabis users who reported receiving help to reduce their level of drug use in the last 12 months, by sex

Sex	Percent	Confidence interval
Men	0.7	0.2–1.7
Women	2.1	0.7–4.6
Total	1.2	0.6–2.2

Table A21: Adjusted rate ratio: cannabis users who reported receiving help to reduce their level of drug use in the last 12 months

Comparator group	Adjusted rate ratio
Men vs women	0.7

* Statistically significant difference between the two groups.

Table A22: Percentage of cannabis users who reported wanting help to reduce their level of drug use, but did not get it in last 12 months, by age and sex

	Percent	Confidence interval
Sex		
Men	4.3	2.5–7
Women	2.5	1.4–4.2
Total	3.6	2.4–5
Age distribution		
15–24	4.0	1.9–7
25–34	3.2	1.5–6
35–44	4.7	1.7–10
45–54	3.6	1.4–8
55+	1	0–4.4

Table A23: Adjusted rate ratio: cannabis users who reported wanting help to reduce their level of drug use, but did not get it in last 12 months

Comparator group	Adjusted rate ratio
Men vs women	1.7

* Statistically significant difference between the two groups.

Cannabis use for medicinal purposes

Table A24: Percentage of cannabis users who used cannabis to treat pain or other medical condition in last 12 month, by socio-demographic categories

	Percent	Confidence interval
Sex		
Men	41	37–46
Women	43	37–48
Total	42	38–46
Age distribution		
15–24	37	31–44
25–34	42	34–50
35–44	40	32–48
45–54	50	42–59
55+	53	40–67
Age distribution men		
15–24	40	32–49
25–34	40	30–50
35–44	36	27–46
45–54	50	39–60
55+	51	33–70
Age distribution women		
15–24	33	25–43
25–34	46	36–57
35–44	50	37–62
45–54	51	37–66
55+	58	33–79
Ethnic group		
Māori	42	36–49
Pacific	31	21–43
European/Others	43	38–47
NZDep2013		
Quintile 1	34	23–47
Quintile 2	37	28–48
Quintile 3	43	33–52
Quintile 4	44	38–50
Quintile 5	47	41–52

Changes in cannabis use from 2007/08

Table A25: Percentage of adults aged 16–64 years who used cannabis in the last 12 months, 2007/08 and 2012/13

	2007/08		2012/13	
	Percent	Confidence interval	Percent	Confidence interval
Sex				
Total	15	13–16	14	13–14
Men	18	16–20	17	16–19
Women	11	10–13	10	9.0–11

Source: 2007/08 and 2012/13 New Zealand Health Survey

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