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Table of contents

List of tables ..... ***ii***

List of figures ..... ***iii***

Introduction ***1***

1 Tobacco - adults ***2***

1.1 Prevalence - overview *2*

1.2 Prevalence - Australia *3*

1.3 Prevalence – United Kingdom *5*

1.4 Consumption - overview *6*

1.5 Consumption - Australia *7*

2 Tobacco - young people ***10***

2.1 Prevalence - overview *10*

2.2 Prevalence - Australia *12*

2.3 Prevalence - United Kingdom *13*

3 Alcohol - adults ***15***

3.1 Consumption - overview *15*

3.2 Consumption - Australia *16*

3.3 Consumption - New Zealand *19*

3.4 Consumption - United States *20*

4 Alcohol - young people ***22***

4.1 Prevalence - overview *22*

4.2 Prevalence - Australia *23*

4.3 Prevalence - United Kingdom *26*

5 Illicit drugs - adults ***27***

5.1 Prevalence - overview *27*

5.2 Prevalence - cannabis *28*

5.3 Prevalence - amphetamines *29*

5.4 Prevalence - cocaine *30*

5.5 Prevalence - ecstasy *31*

5.6 Prevalence - Australia *32*

6 Illicit drugs - young people ***34***

6.1 Prevalence - overview *34*

6.2 Prevalence - United States *34*

6.3 Prevalence - cannabis *36*

6.4 Prevalence - Australia *36*

6.5 Prevalence - amphetamines *38*

6.6 Prevalence - cocaine *38*

6.7 Prevalence - ecstasy *39*

7 Infectious diseases ***40***

7.1 HIV 40

7.2 Hepatitis C *41*

8 Mortality ***43***

8.1 Overview *43*

8.2 Methodological issues *44*

9 References ***46***

List of tables

Table 1.1: Prevalence (%) of regular smoking by adults 3

Table 1.2: Prevalence (%) of regular smoking by adult Australians, 1945-1998 3

Table 1.3: Prevalence (%) of regular smoking by adults, England 1976-1996 5

Table 1.4: Apparent tobacco consumption (gms per capita) persons aged 15 yrs+ 6

Table 1.5: Estimated total consumption (millions of kgs) of all tobacco products, Australia, 1910-1997 8

Table 1.6: Apparent total tobacco consumption (gms per capita) persons aged 15 yrs+, Australia, 1910-1997 9

Table 2.1: Proportion (%) of young people who smoke daily 10

Table 2.2: Proportion (%) of young people who smoke at least once per week 11

Table 2.3: Proportion (%) of 11 to 15 year olds who were regular smokers, ... 14
United Kingdom, 1982 - 2000 14

Table 3.1: Apparent adult per capita consumption of alcohol - type of alcohol 15

Table 3.2: Apparent total adult alcohol consumption 16

Table 3.3: Apparent adult alcohol consumption, Australia, 1976/1977 - 1998/1999 17

Table 3.4: Proportion (%) of current drinkers by quantity of alcohol consumption and frequency of consumption, Australia, 1998 19

Table 3.5: Apparent adult alcohol consumption, New Zealand, 1987 - 1998 20

Table 3.6: Apparent adult alcohol consumption, United States, 1975 - 1996 21

Table 4.1 Proportion (%) of young people who drank alcohol at least weekly 22

Table 4.2: Proportion (%) of 11-15 year olds who drank in last week United Kingdom, 1988 - 1999 26

Table 5.1: Lifetime prevalence (%) of amphetamines, cocaine, ecstasy and cannabis - adults 27

Table 5.2: Annual prevalence (%) of amphetamines, cocaine, ecstasy and cannabis - adults 27

Table 5.3: Prevalence of illicit drug used by Australian adults, 1991-1998 32

Table 5.4: Prevalence (%) of cannabis use by adults, Australia, 1985 - 1998 33

Table 6.1: Lifetime prevalence (%) of amphetamines, cocaine, ecstasy and cannabis - students 34

Table 6.2: Use of drugs in past year (%), school students 11-15 years England, 1998-2000 36

Table 6.3: Prevalence (%) of cannabis use by 14-19 year olds, Australia, 1985 - 1998 37

Table 7.1: Prevalence (%) of HIV infection among injecting drug users 40

Table 7.2: Prevalence (%) of hepatitis C among injecting drug users 41

Table 8.1: Number of drug related deaths, 1985 – 1998 44

Table 8.2: List of ICD9 codes used to count deaths caused by drugs other than alcohol or tobacco 45

List of figures

Figure 1.1: Prevalence (%) of regular smoking by adults....2

Figure 1.2: Prevalence (%) of regular smoking by adult Australians, 1945-1998....4

Figure 1.3: Patterns of recent smoking by adult males, Australia, 1998....4

Figure 1.4: Patterns of recent smoking by adult females, Australia, 1998....5

Figure 1.5: Prevalence (%) of regular smoking by adults, England 1976-1996....6

Figure 1.6: Apparent adult tobacco consumption....7

Figure 1.7: Estimated total consumption (millions of kgs) of all tobacco products, Australia, 1910-1997....8

Figure 1.8: Apparent total tobacco consumption (gms per capita), persons aged 15+ yrs, Australia, 1910-1997....9

Figure 2.1: Proportion (%) of young people who smoke daily....10

Figure 2.2: Proportion (%) of young people who smoke at least once per week....11

Figure 2.3: Proportion (%) of 16 to 17 year olds who smoke at least once a week, Australia, 1984 - 1996....12

Figure 2.4: Proportion (%) of 12 to 15 year olds who smoke at least once a week, Australia, 1984 - 1996....13

Figure 2.5: Proportion (%) of 11 to 15 year olds who were regular smokers United Kingdom, 1982 – 2000....14

Figure 3.1: Apparent total adult alcohol consumption....16

Figure 3.2: Apparent adult alcohol consumption, Australia, 1976/1977 - 1998/1999....17

Figure 3.3: Apparent adult alcohol consumption, New Zealand, 1987 - 1998....20

Figure 3.4: Apparent adult alcohol consumption, United States, 1975 - 1996....21

Figure 4.1 Proportion (%) of young people who drank alcohol at least weekly....23

Figure 4.2: Proportion (%) of males aged 12-15 years who are current and hazardous drinkers, Australia, 1984-1996....24

Figure 4.3: Proportion (%) of females aged 12-15 years who are current and hazardous drinkers, Australia, 1984-1996....24

Figure 4.4: Proportion (%) of males aged 16-17 years who are current and hazardous drinkers, Australia, 1984-1996....25

Figure 4.5: Proportion (%) of females aged 16-17 years who are current and hazardous drinkers, Australia, 1984-1996....25

Figure 4.6: Proportion (%) of 11-15 year olds who drank in last week United Kingdom, 1988 - 1999....26

Figure 5.1: Lifetime prevalence (%) of cannabis use - adults....28

Figure 5.2: Annual prevalence (%) of cannabis use - adults....28

Figure 5.3: Lifetime prevalence (%) of amphetamine use - adults....29

Figure 5.4: Annual prevalence (%) of amphetamine use - adults....29

Figure 5.5: Lifetime prevalence (%) of cocaine use - adults....30

Figure 5.6: Annual prevalence (%) of cocaine use - adults....30

Figure 5.7: Lifetime prevalence (%) of ecstasy use - adults 31
Figure 5.8: Annual prevalence (%) of ecstasy use - adults 31
Figure 5.9: Prevalence (%) of cannabis use by adults, Australia, 1985 - 1998 33
Figure 6.1: Annual prevalence (%) of illicit drug use by 17 year olds United States, 1975 - 1999 35
Figure 6.2: Lifetime prevalence (%) of cannabis use - young people 36
Figure 6.3: Prevalence (%) of cannabis use by 37
14-19 year olds, Australia, 1985 - 1998 37
Figure 6.4: Lifetime prevalence (%) of amphetamine use - young people 38
Figure 6.5: Lifetime prevalence (%) of cocaine use - young people 38
Figure 6.6: Lifetime prevalence (%) of ecstasy use - young people 39
Figure 7.1: Prevalence (%) of HIV infection among injecting drug users 41
Figure 7.2: Prevalence (%) of hepatitis C infection among injecting drug users 42

Introduction

The first edition of this publication was published in December 2000. This edition contains prevalence data and other indicators of drug abuse for tobacco, alcohol and other drugs from recent surveys conducted in Australia, New Zealand, North America and the major European countries. The report also contains data in relation to tobacco and alcohol prevalence for a limited number of Asian countries.

The objective of this report is to facilitate comparative analyses of patterns of drug abuse between Australia and other major jurisdictions by reference to a set of indicators of drug abuse.

Variations in availability of data for different drugs for different jurisdictions has influenced the selection of particular countries that have been included in different sections of this document. Where available, data has been presented separately for adults and young people.

As there are variations in the definition of these two broad groups between the different countries it is important to take account of age range cut offs and that the term 'young people' usually involves secondary or university students.

The indicators of drug abuse cover the following broad areas:

- tobacco;
- alcohol;
- illicit drugs; and
- infectious diseases.

Caution should be exercised in interpretation of differences as these may be due to differences in data collection methods, age ranges of those sampled and social cultural factors which could influence reliable reporting of drug use.

Because of marked variations in the availability of data for different developed countries it is not possible to obtain consistent information for all groups of drugs across all countries. Variations in ages used in jurisdictions should be noted for different sample populations of adults and young people.

Data is presented in a summarised form as tables and figures. Information used in this report has been extracted from publicly available reports, research studies and official documents listed in references section at the end of this document.

This document will be updated from time to time, depending on the release of more recent survey data for specific jurisdictions and on the improved availability of additional indicators of abuse across a number of countries.

1 Tobacco - adults

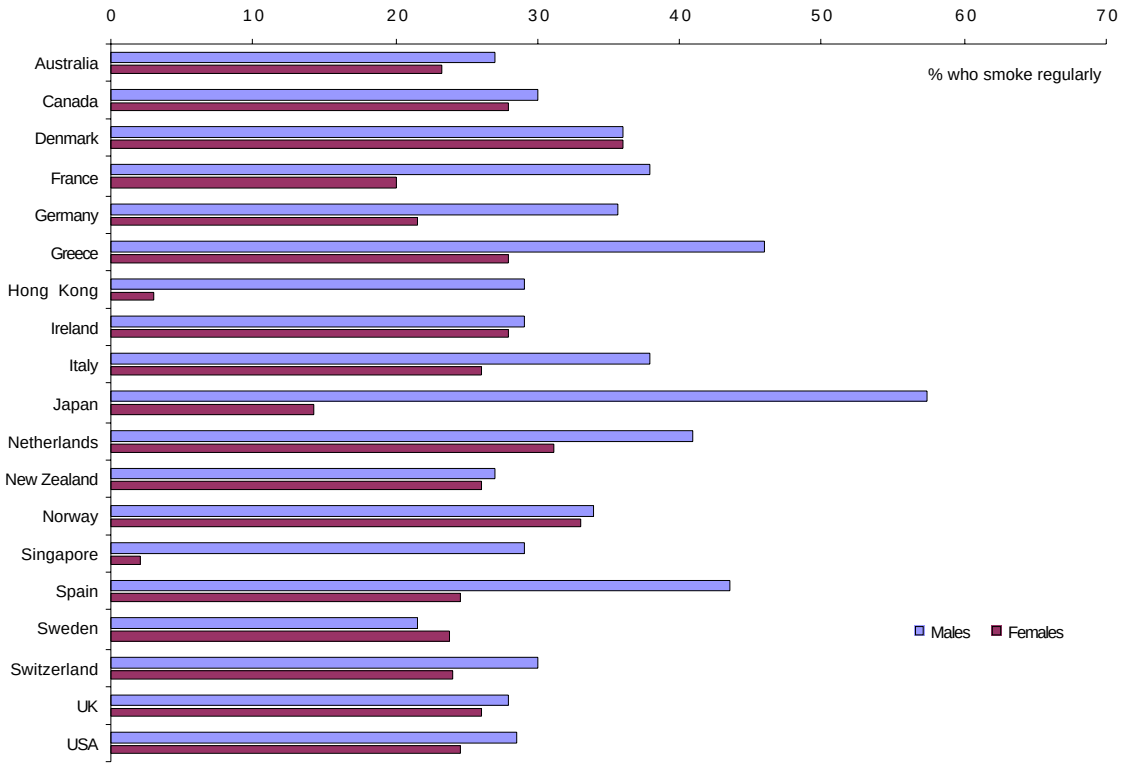
Tobacco smoking is the leading cause of drug related deaths in Australia, being responsible for about 79% of all drug related deaths, with about 17% due to alcohol and about 4% due to other drugs.[1] There are variations in the definition of regular smoking, being defined as smoking daily or most days per week in Australian surveys, at least once per week in European surveys and having smoked in the past month in national surveys in the United States.

1.1 Prevalence - overview

The rates for regular smoking by Australian adults compares favourably with most other developed countries (Table 1.1). There is a higher rate of regular smoking by adult males than adult females in all countries except Sweden, where adult females smoke more than men. In Denmark men and women have the same rates of smoking.

In Spain, Greece, France and Germany and the Asian countries, substantially more males than females are regular smokers (Figure 1.1).

Figure 1.1: Prevalence (%) of regular smoking by adults



[1] Unwin E, Codde J. *Comparison of deaths due to alcohol, tobacco and other drugs in Western Australia and Australia*. Perth, Health Information Centre, Health Department of WA, 1998.

Table 1.1: Prevalence (%) of regular smoking by adults

Country	Year	Age	Males	Females
Australia	1995	14 yrs+	25.9	21.8
Canada	1993	15 yrs+	30.0	28.0
Denmark	1996	15 yrs+	36.0	36.0
France	1992	15 yrs+	38.0	20.0
Germany	1995	15 yrs+	35.6	21.5
Greece	1994	15 yrs+	46.0	28.0
Hong Kong	1990	15 yrs+	29.0	3.0
Ireland	1994	15 yrs+	29.0	28.0
Italy	1994	15 yrs+	38.0	26.0
Japan	1996	20 yrs+	57.5	14.2

Country	Age	Year	Males	Females
Netherlands	15 yrs+	1995	40.9	31.2
New Zealand	15 yrs+	1995	27.0	26.0
Norway	15 yrs+	1996	34.0	33.0
Singapore	15 yrs+	1992	29.0	2.0
Spain	15 yrs+	1995	43.5	24.5
Sweden	16 yrs+	1994	21.6	23.8
Switzerland	15 yrs+	1992	30.1	24.1
UK	16 yrs+	1994	28.0	26.0
USA	18 yrs+	1992	28.6	24.6

Source: de Looper & Bhatia (1998) , Australian Institute of Health and Welfare (1999).

1.2 Prevalence - Australia

In 1945 nearly three times as many Australian adult males as adult females smoke were regular smokers (72% vs 26%) and by 1998 had dropped to 29% vs 24% (Table 1.2).

Since 1945 there has been a very marked drop in adult male smoking prevalence. Over the last 25 years the smoking rate of males decreased by 29%, from 41% in 1974 to 29% in 1998.

Compared to males, female rates increased from 26% in 1945 to a peak of 31% in 1981. Since 1981 the female rate of regular smoking has declined by nearly a quarter to 24% in 1998 (Figure 1.2).

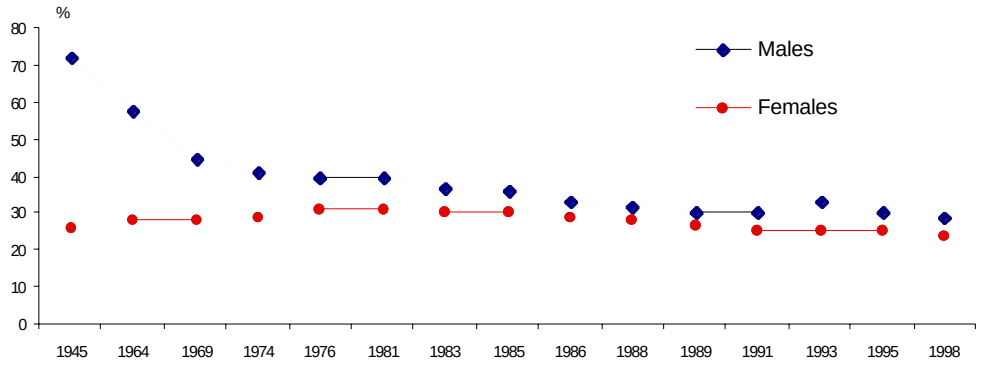
Table 1.2: Prevalence (%) of regular smoking by adult Australians, 1945-1998

Year	Males	Females
1945	72	26
1964	58	28
1969	45	28
1974	41	29
1976	40	31
1981	40	31
1983	37	30
1985	36	30

Year	Males	Females
1986	33	29
1988	32	28
1989	30	27
1991	30	25
1993	33	25
1995	30	25
1998	29	24

Source: Makkai & McAllister (1998)

Figure 1.2: Prevalence (%) of regular smoking by adult Australians, 1945-1998

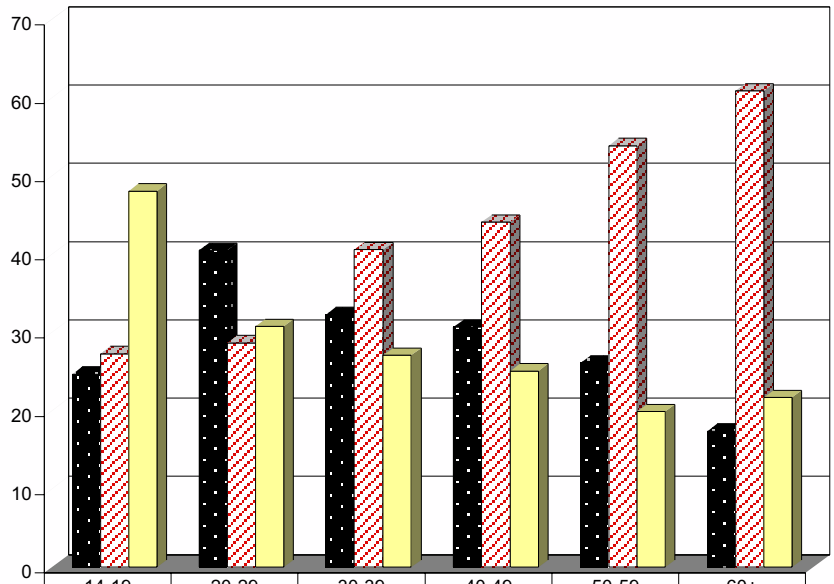


Recent use

The 1998 National Drug Strategy Household Survey found that overall 29.4% of all males aged 14 years and over and 23.9% of all females aged 14 years and over were current smokers. For all age groups females were also more likely than males to have never smoked a full cigarette (39.6% vs 27.8%).

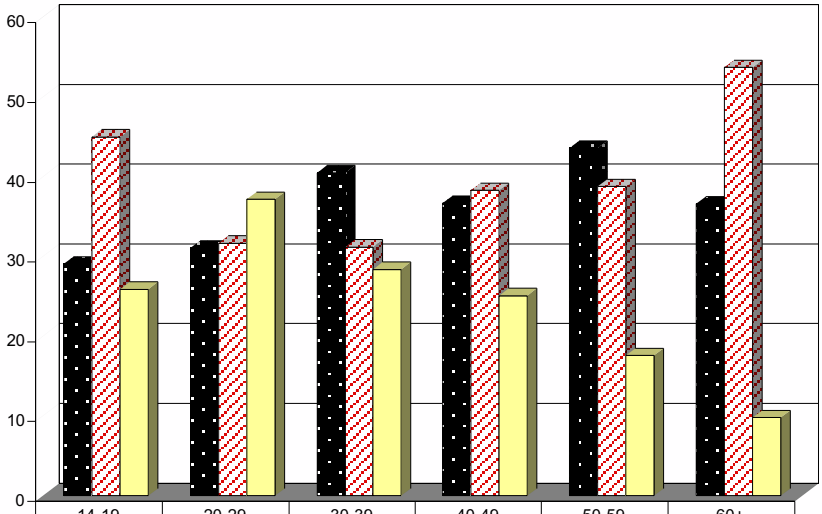
The highest proportion of regular smoking occurred in the 20 to 29 year age group for both males (40.5%) (Figure 1.3) and females (37.2%) (Figure 1.4).

Figure 1.3: Patterns of recent smoking by adult males, Australia, 1998



	14-19	20-29	30-39	40-49	50-59	60+
Smokers	24.7	40.5	32.3	30.7	26.1	17.4
Ex smokers	27.3	28.7	40.6	44.1	53.9	60.9
Never smoked	48.1	30.8	27.1	25.1	19.9	21.7

Figure 1.4: Patterns of recent smoking by adult females, Australia, 1998



	14-19	20-29	30-39	40-49	50-59	60+
Ex smokers	29.1	31.1	40.5	36.7	43.6	36.6
Never smoked	45	31.7	31.2	38.3	38.8	53.7
Smokers	25.9	37.2	28.4	25.1	17.6	9.8

1.3 Prevalence – United Kingdom

The prevalence of cigarette smoking among adults[2] has been measured in General Household Surveys conducted by the Office of National Statistics. A question on smoking has been included in GHS by annual survey since 1972.

Prevalence of cigarette smoking has dropped substantially from 41% (males 45% amd females 37%) in 1976 to 28% (28% males and 27% females) in 1996 (Table 1.3, Figure 1.5). This was a continuation of a longer trend of prevalence that had been falling since 1948, when 65% of males and 41% of females were regular smokers.

Between 1994 and 1996 the smoking prevalence rate for adults increased from 26% to 28%, with a portion of males who were regular smokers remaining the same (28%) whereas there was an increase from 25% to 27% for females.

Table 1.3: Prevalence (%) of regular smoking by adults, England 1976-1996

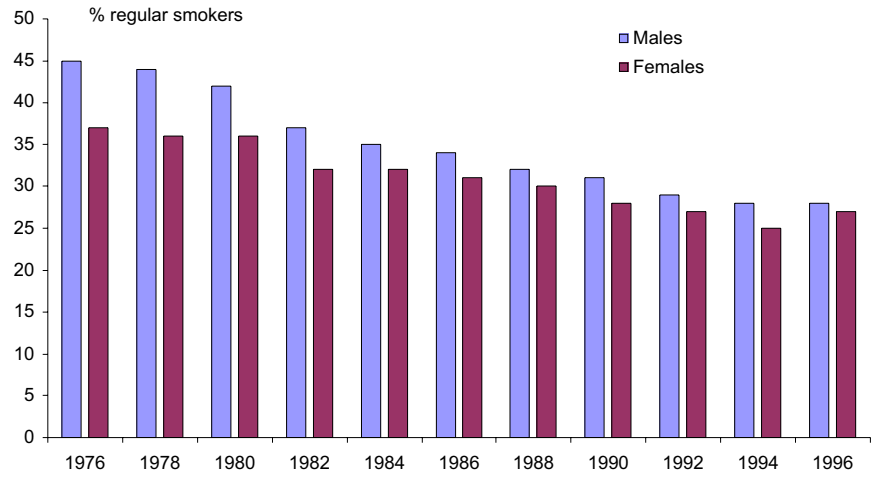
Year	Males	Females	Persons
1976	45	37	41
1978	44	36	40
1980	42	36	39
1982	37	32	35
1984	35	32	33
1986	34	31	32

Year	Males	Females	Persons
1988	32	30	31
1990	31	28	29
1992	29	27	28
1994	28	25	26
1996	28	27	28

Source: Department of Health, UK (1998).

[2] Defined as persons aged 16 years and older.

Figure 1.5: Prevalence (%) of regular smoking by adults, England 1976-1996



1.4 Consumption - overview

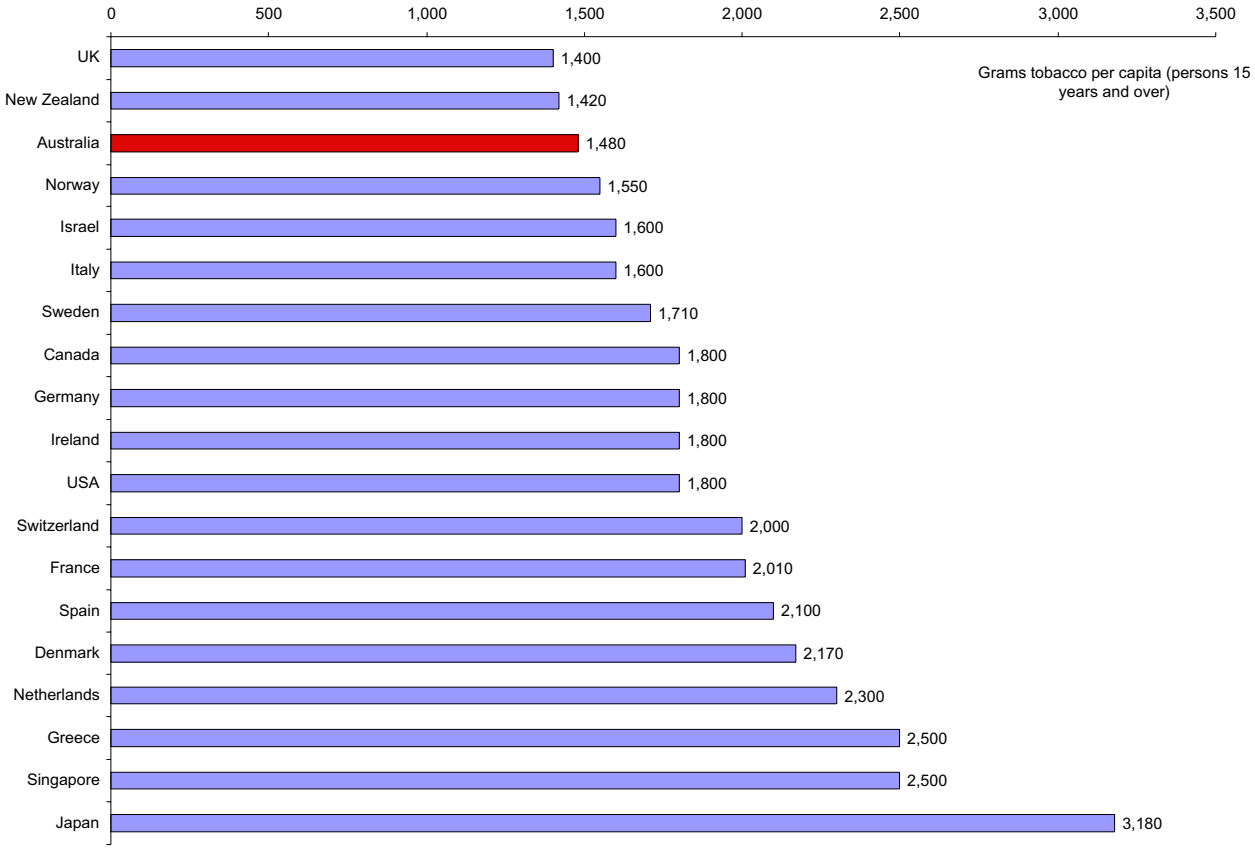
The Australian rate of adult tobacco consumption for males and females compares favourably with the other developed countries, with a national rate of 1,480 grams of tobacco per capita (persons aged 15 years and older), ranked third lowest out of 19 countries (Table 1.4, Figure 1.6).

Table 1.4: Apparent tobacco consumption (gms per capita) persons aged 15 yrs+

Country	Year	gms tobacco per capita	Country	Year	gms tobacco per capita
Australia	1995-96	1,480	Netherlands	1995	2,300
Canada	1995	1,800	New Zealand	1995	1,420
Denmark	1996	2,170	Norway	1997	1,550
France	1996	2,010	Singapore	1995	2,500
Germany	1995	1,800	Spain	1995	2,100
Greece	1995	2,500	Sweden	1996	1,710
Ireland	1994	1,600	Switzerland	1995	2,000
Israel	1995	1,600	UK	1995	1,400
Italy	1995	1,600	USA	1995	1,800
Japan	1995	3,180			

Source: de Looper & Bhatia (1998)

Figure 1.6: Apparent adult tobacco consumption



1.5 Consumption - Australia

Total tobacco consumption in Australia has been declining since the mid 1970s. It has been noted that this coincided with the prohibition of direct tobacco advertising in television and radio in 1976.[3]

The trends in estimated total consumption (Table 1.5) and apparent per capita consumption (Table 1.6) of tobacco for selected years from 1910 to 1997, show that tobacco consumption has been declining since the early 1970s.

There has been a decline of 35% in total consumption from a peak of 33 million kgs of tobacco in 1975 to 21.5 million kgs in 1997 (Figure 1.7).

Per capita consumption peaked in 1960 with a mean of 3,515 grams per capita and since has steadily declined to 1,472 grams per capita in 1997 (Figure 1.8), a decline of 58%.

[3] Winstanley M, Woodward S, Walker N. *Tobacco in Australia. Facts and Issues, 1995*. (Second Ed). Carlton South, Victorian Smoking and Health Program, 1995.

Figure 1.7: Estimated total consumption (millions of kgs) of all tobacco products, Australia, 1910-1997

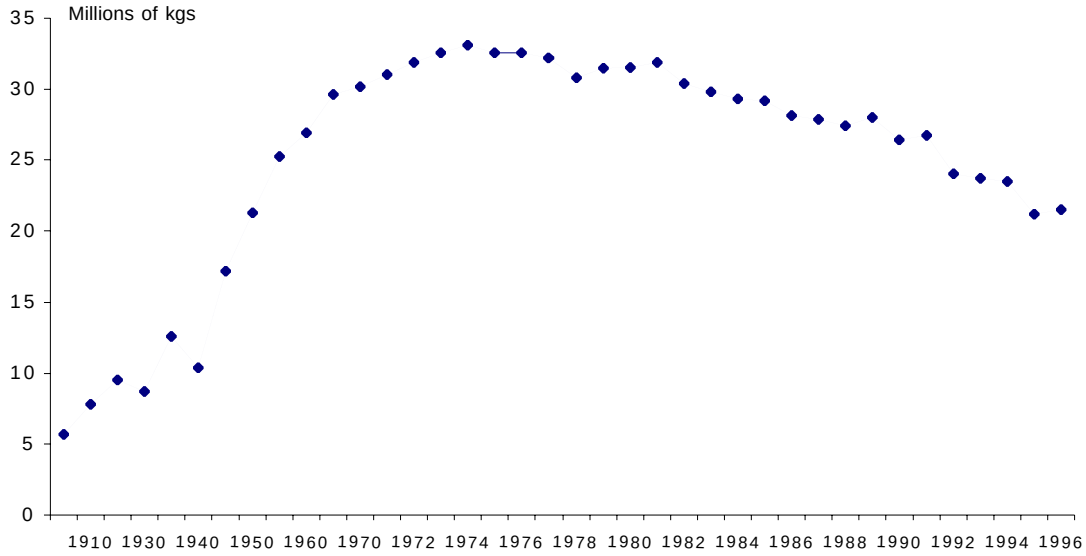


Table 1.5: Estimated total consumption (millions of kgs) of all tobacco products, Australia, 1910-1997

Year	Millions kgs of tobacco
1910	5,708,564
1920	7,807,267
1930	9,534,390
1935	8,721,299
1940	12,613,020
1945	10,404,084
1950	17,160,327
1955	21,283,387
1960	25,242,024
1965	26,894,611
1970	29,609,659
1971	30,147,158
1972	31,017,114
1973	31,880,284
1974	32,539,548
1975	33,085,938
1976	32,560,439
1977	32,577,980
1978	32,202,498

Year	Millions kgs of tobacco
1979	30,789,474
1980	31,456,071
1981	31,527,627
1982	31,902,889
1983	30,373,400
1984	29,825,513
1985	29,323,104
1986	29,173,451
1987	28,116,179
1988	27,853,947
1989	27,431,884
1990	28,012,727
1991	26,439,707
1992	26,756,275
1993	24,012,498
1994	23,698,961
1995	23,483,408
1996	21,180,653
1997	21,511,140

Source:Winstanley, Woodward and Walker, 1995.

Figure 1.8: Apparent total tobacco consumption (gms per capita), persons aged 15+ yrs, Australia, 1910-1997

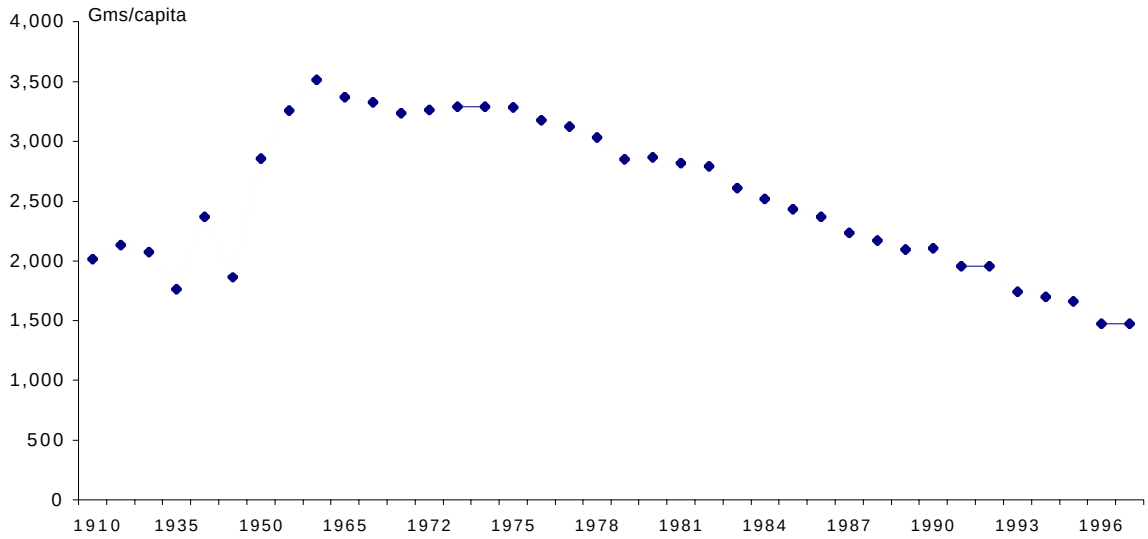


Table 1.6: Apparent total tobacco consumption (gms per capita) persons aged 15 yrs+, Australia, 1910-1997

Year	gms per capita
1910	2,014
1920	2,132
1930	2,074
1935	1,757
1940	2,370
1945	1,859
1950	2,855
1955	3,257
1960	3,515
1965	3,370
1970	3,326
1971	3,235
1972	3,261
1973	3,289
1974	3,287
1975	3,284
1976	3,178
1977	3,124
1978	3,033

Year	gms per capita
1979	2,852
1980	2,864
1981	2,816
1982	2,789
1983	2,609
1984	2,518
1985	2,431
1986	2,368
1987	2,236
1988	2,170
1989	2,096
1990	2,105
1991	1,959
1992	1,956
1993	1,736
1994	1,693
1995	1,656
1996	1,471
1997	1,472

Source:Winstanley, Woodward and Walker, 1995.

2 Tobacco - young people

2.1 Prevalence - overview

Daily smoking

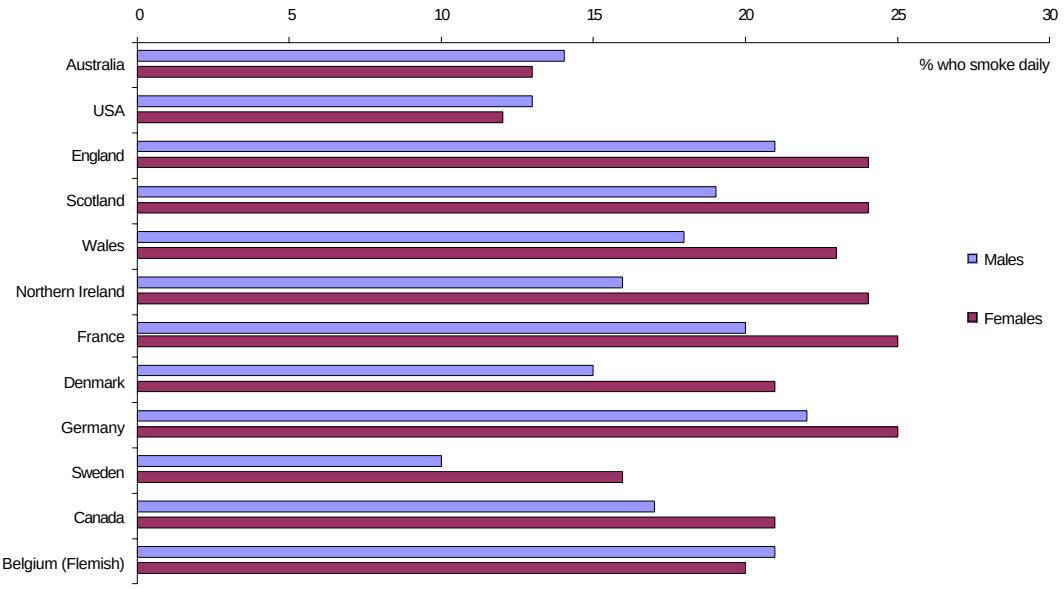
In Australia, the United States and Belgium a higher proportion of young males are daily smokers compared to young females whereas in England, Scotland and Wales, North Ireland, France, Denmark Germany, Sweden and Canada a higher proportion of young females are daily smokers (Table 2.1, Figure 2.1).

Table 2.1: Proportion (%) of young people who smoke daily

	Year	Age group	Males	Females
Australia	1996	15	14.0	13.0
USA	1997/1998	15	13.0	12.0
England	2000	15	21.0	26.0
Scotland	1997/1998	15	19.0	24.0
Wales	1997/1998	15	18.0	23.0
Northern Ireland	1997/1998	15	16.0	24.0
France	1997/1998	15	20.0	25.0
Denmark	1997/1998	15	15.0	21.0
Germany	1997/1998	15	22.0	25.0
Sweden	1997/1998	15	10.0	16.0
Canada	1997/1998	15	17.0	21.0
Belgium (Flemish)	1997/1998	15	21.0	20.0

Source: Currie et al (2000; Department of Health, UK (2000).

Figure 2.1: Proportion (%) of young people who smoke daily



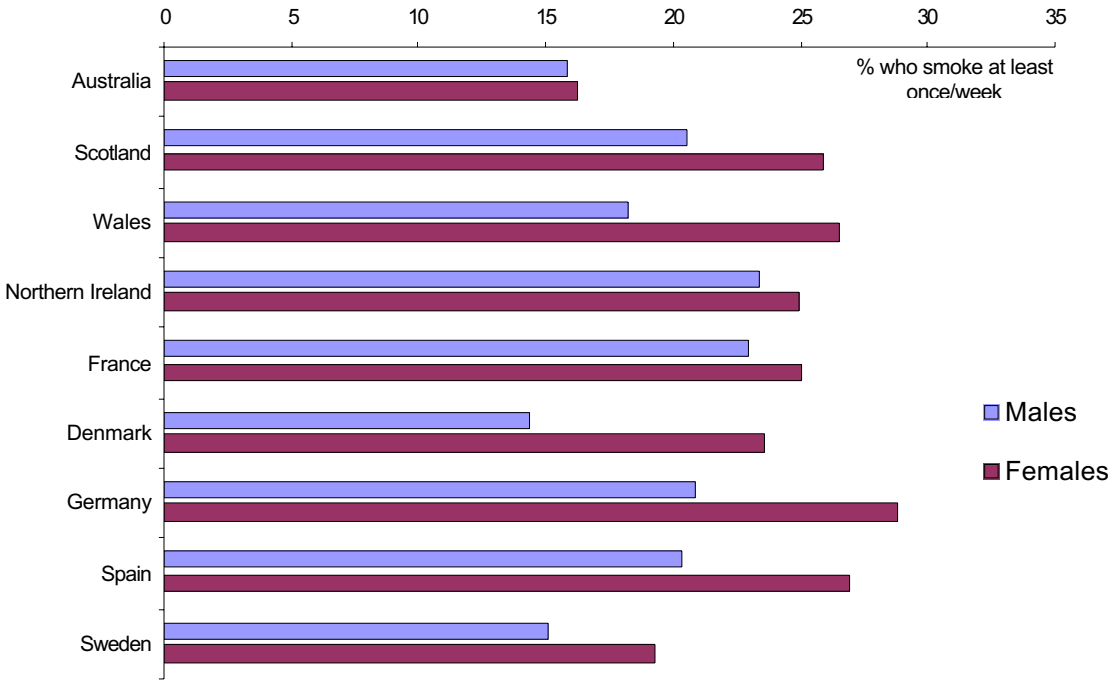
Weekly smoking

In all European countries a high proportion of young females compared to males smoke at least once a week (Table 2.2, Figure 2.2). A similar pattern of higher female rates may also occur in Australia as 16.2% of 14 to 19 year old females compared to 15.8% of 14 to 19 year old males report smoking at least once a week.

Table 2.2: Proportion (%) of young people who smoke at least once per week

Country	Age group	Males	Females
Australia	14-19	15.8	16.2
Scotland	15	20.5	25.9
Wales	15	18.2	26.5
Northern Ireland	15	23.4	24.9
France	15	23.0	25.0
Denmark	15	14.4	23.6
Germany	15	20.9	28.8
Spain	15	20.3	26.9
Sweden	15	15.1	19.3

Figure 2.2: Proportion (%) of young people who smoke at least once per week



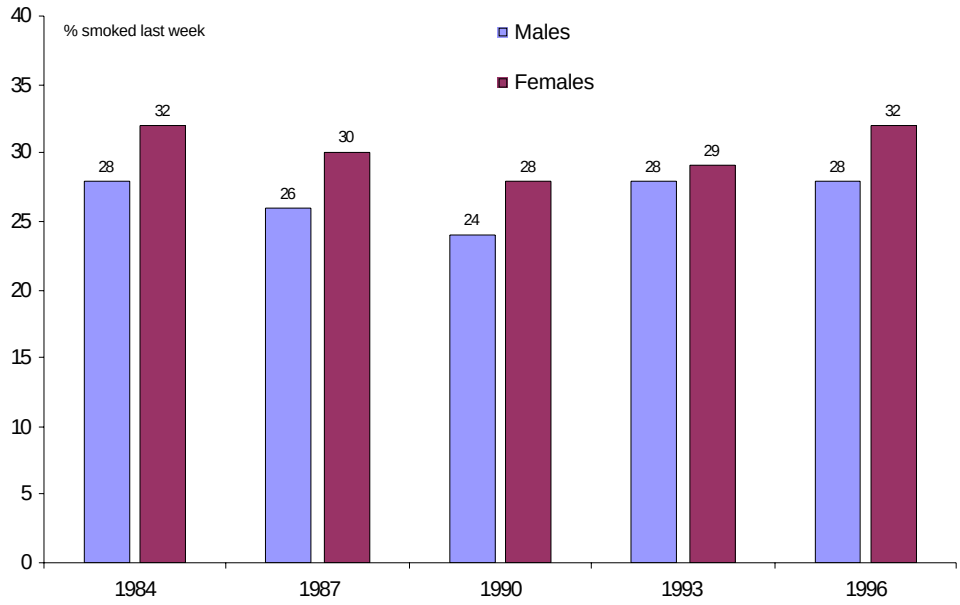
2.2 Prevalence - Australia

An analysis of trends in prevalence from the five national surveys of Australian secondary school students conducted between 1984 and 1996 by the Anti Cancer Council of Victoria has recently been published.[4]

16-17 year olds

Prevalence data for 16 to 17 year old current student smokers (ie have smoked in the last seven days) is presented in Figure 2.3. Higher rates were reported by females in each survey, with the lowest rates for both males and females reported in the 1990 survey (24% vs 28%).

Figure 2.3: Proportion (%) of 16 to 17 year olds who smoke at least once a week, Australia, 1984 - 1996



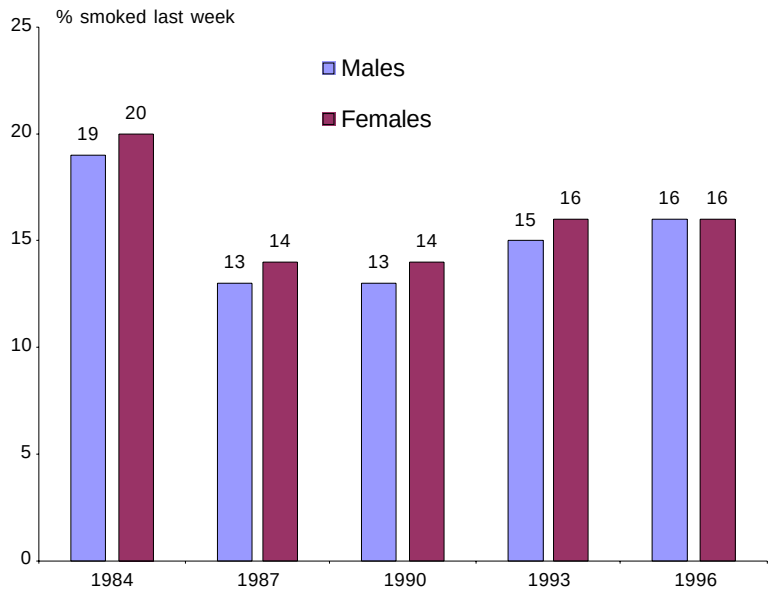
[4] Hill D, White V, Letcher T. "Tobacco use among Australian secondary students in 1996". *Australian and New Zealand Journal of Public Health*. 1999, 23: 252-259.

12-15 year olds

Prevalence data for 12 to 15 year old current student smokers is presented in Figure 2.4. Female rates were slightly higher in the first four surveys up to 1993 and in the 1996 survey was 16% for both males and females.

There was a noticeable drop in the prevalence for both males and females from 1984 to 1987 for this age group. Rates for both males and females stabilised in the 1987 and 1990 surveys and then have increased slightly in the 1993 and 1996 surveys.

Figure 2.4: Proportion (%) of 12 to 15 year olds who smoke at least once a week, Australia, 1984 - 1996



2.3 Prevalence - United Kingdom

Prevalence data for 11 to 15 year old students who are regular smokers is presented in Table 2.3. Regular smoking was defined in the survey as smoking at least one cigarette a week.

In the first two surveys in 1982 and 1984 the same rates were recorded for males and females. However, in the remaining nine surveys up to 2000 higher rates were recorded for females than males (Figure 2.5).

Male rates dropped by 46% from 1984 (13%) to 1988 (7%) and then increased in 1996 (11%). More recently there has been a decrease of 18% in the male rate, from 11% in 1996 to 9% in 2000.

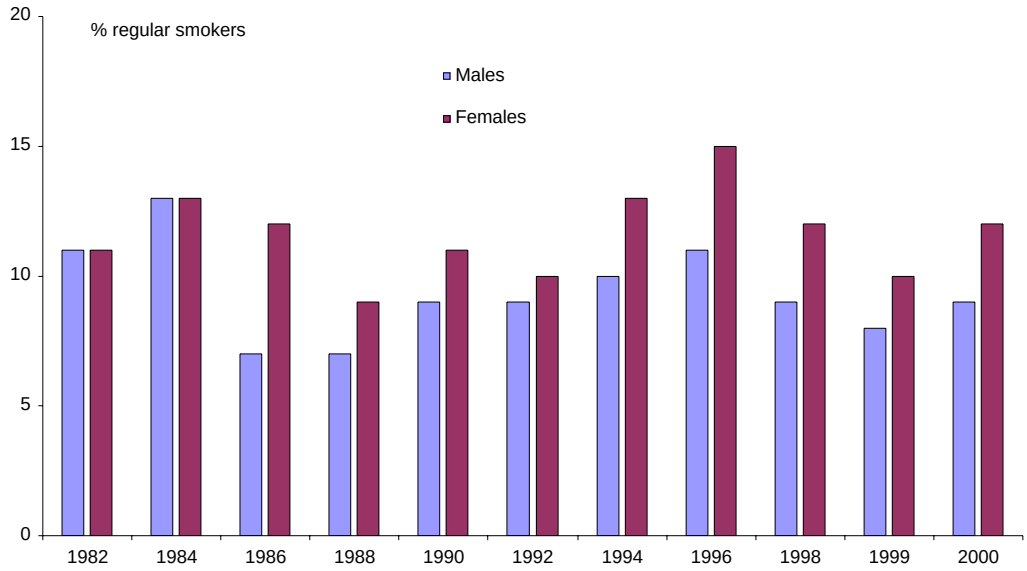
Female rates dropped by 31% from 1984 (13%) to 1988 (9%) and then increased by two thirds to a rate of 15% in 1996. There was a decrease of one third in the female rate from 1996 to 1999 (10%). In the most recent survey there was an increase in the female rate of regular smoking from 10% in 1999 to 12% in 2000.

Table 2.3: Proportion (%) of 11 to 15 year olds who were regular smokers, United Kingdom, 1982 - 2000

	Males	Females	All
1982	11	11	11
1984	13	13	13
1986	7	12	10
1988	7	9	8
1990	9	11	10
1992	9	10	10
1994	10	13	12
1996	11	15	13
1998	9	12	11
1999	8	10	9
2000	9	12	10

Source: National Centre for Social Research (2001).

Figure 2.5: Proportion (%) of 11 to 15 year olds who were regular smokers United Kingdom, 1982 – 2000



3 Alcohol - adults

3.1 Consumption - overview

Alcohol sales data is collected in most developed countries and this is used to estimate per capita alcohol consumption. The annual volume of the sale of different alcohol beverages can be converted to litres of absolute alcohol to calculate the rate of consumption[5] in the 19 nations listed in Table 3.1.

It should be noted that per capita alcohol consumption data does not provide sufficient information about the number of persons engaged in risk drinking behaviours. To measure risk behaviour drinking patterns such as binge drinking, frequency of intoxication and an amount of consumption need to be obtained from population based surveys. Comparable data cannot be readily obtained from such surveys.

Australia ranked sixth out of these 19 countries for per capita consumption of beer, eighth for per capita consumption of wine and twelfth for per capita consumption of spirits (Table 3.1). In 1995 Australia ranked ninth for total alcohol consumption with a per capita consumption of 7.6 litres absolute alcohol (Table 3.2; Figure 3.1).

Table 3.1: Apparent adult per capita consumption of alcohol - type of alcohol

	Beer (total volume)	Wine (total volume)	Spirits (pure alcohol)
Australia	95.4	18.2	1.35
Canada	70.0	8.2	1.75
Denmark	120.1	27.6	1.07
France	39.1	63.5	2.52
Germany	137.7	22.2	2.20
Greece	42.2	34.5	2.70
Ireland	141.3	16.1	1.70
Israel	8.4	3.1	-
Italy	25.4	60.4	0.90
Japan	58.0	1.0	2.00
Netherlands	85.8	16.6	1.74
New Zealand	98.8	16.8	1.13
Norway	53.5	7.1	0.81
Singapore	22.0	0.7	0.50
Spain	66.6	36.3	2.50
Sweden	64.5	12.7	1.46
Switzerland	62.2	43.6	1.49
UK	102.7	12.8	1.33
USA	87.9	6.8	1.97

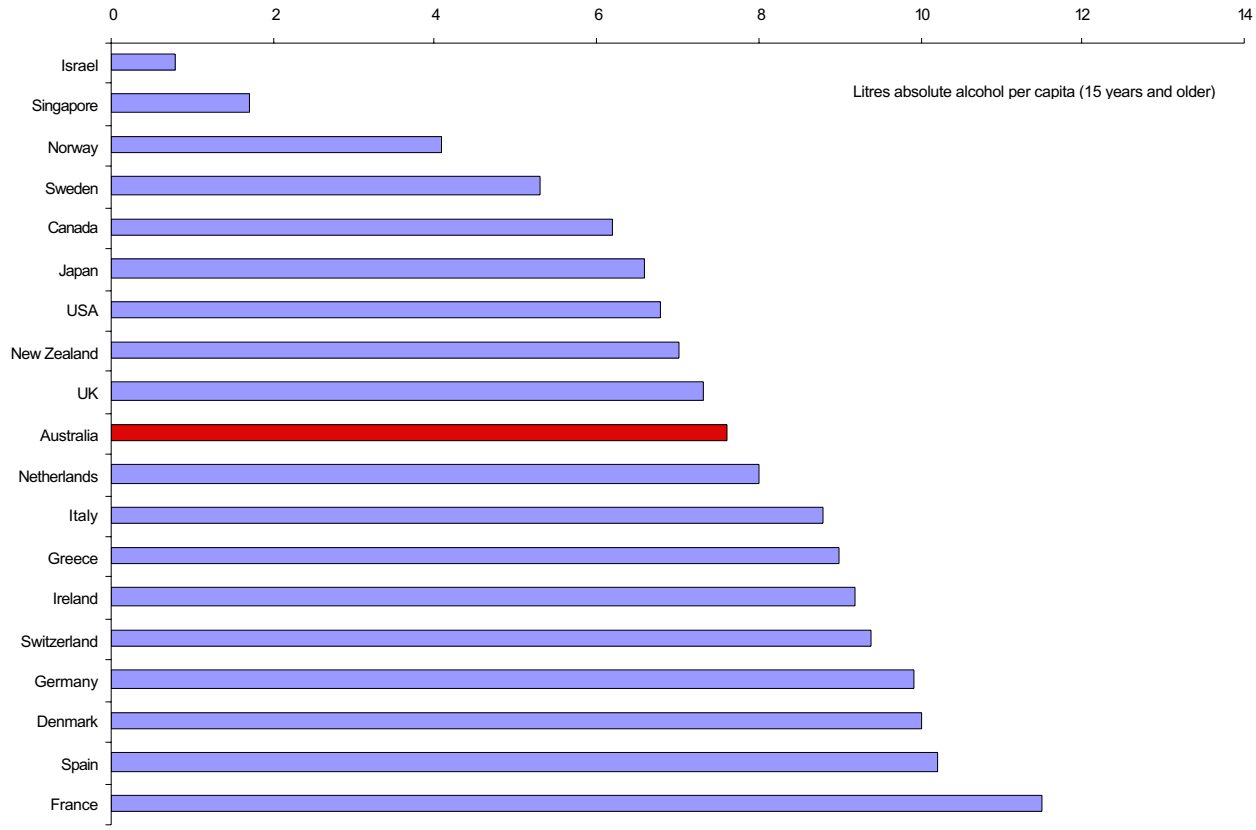
[5] Litres of absolute per capita based on the population aged 15 years and older.

Table 3.2: Apparent total adult alcohol consumption

Country	litres absolute alcohol
Australia	7.6
Canada	6.2
Denmark	10.0
France	11.5
Germany	9.9
Greece	9.0
Ireland	9.2
Israel	0.8
Italy	8.8
Japan	6.6

Country	litres absolute alcohol
Netherlands	8.0
New Zealand	7.0
Norway	4.1
Singapore	1.7
Spain	10.2
Sweden	5.3
Switzerland	9.4
UK	7.3
USA	6.8

Figure 3.1: Apparent total adult alcohol consumption



3.2 Consumption - Australia

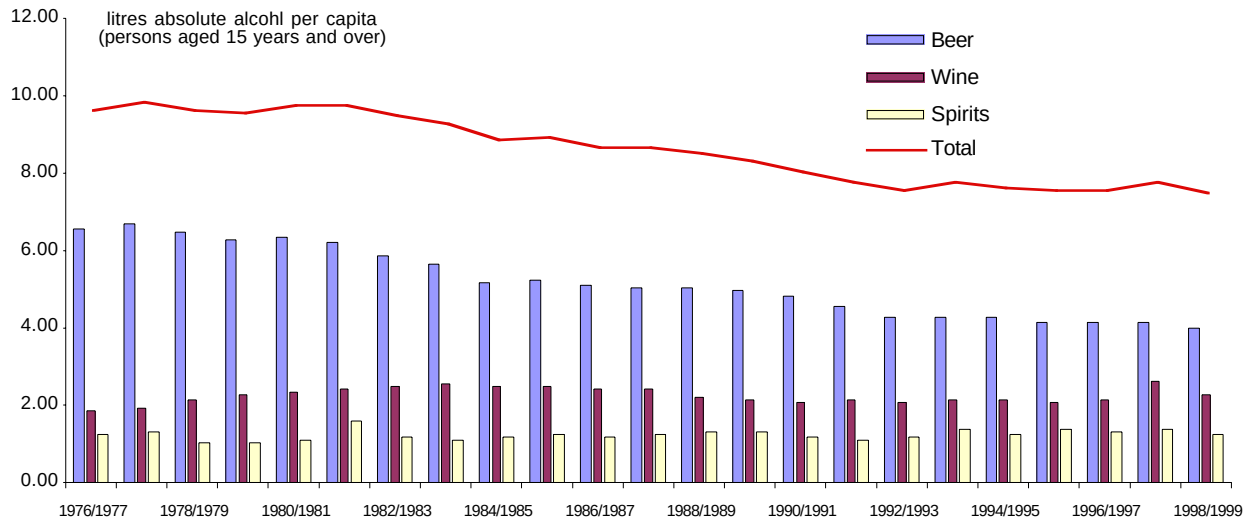
Trends

Throughout the 23 year period 1976/1977 to 1998/1999 per capita consumption of alcohol in Australia declined. At the beginning of this period the rate of consumption of all alcohol was nearly 10 litres of pure alcohol per capita (based on person aged 15 years and older). By 1998/1999 per capita consumption of all alcohol had decreased by 22% to 7.5 litres absolute alcohol per capita (Table 3.3; Figure 3.2).

Table 3.3: Apparent adult alcohol consumption, Australia, 1976/1977 - 1998/1999

	Beer	Wine	Spirits	Total
1976/1977	6.56	1.86	1.26	9.68
1977/1978	6.66	1.90	1.32	9.88
1978/1979	6.46	2.17	1.05	9.68
1979/1980	6.30	2.25	1.01	9.56
1980/1981	6.34	2.35	1.10	9.79
1981/1982	6.19	2.44	1.60	9.79
1982/1983	5.84	2.50	1.17	9.51
1983/1984	5.65	2.57	1.12	9.34
1984/1985	5.19	2.48	1.20	8.87
1985/1986	5.24	2.51	1.22	8.98
1986/1987	5.07	2.44	1.18	8.69
1987/1988	5.03	2.40	1.24	8.66
1988/1989	5.03	2.22	1.29	8.54
1989/1990	4.97	2.13	1.28	8.37
1990/1991	4.80	2.06	1.18	8.04
1991/1992	4.54	2.16	1.12	7.82
1992/1993	4.31	2.10	1.17	7.57
1993/1994	4.30	2.13	1.37	7.79
1994/1995	4.27	2.11	1.26	7.63
1995/1996	4.16	2.10	1.35	7.61
1996/1997	4.15	2.16	1.28	7.59
1997/1998	4.11	2.60	1.39	7.77
1998/1999	4.01	2.26	1.24	7.51

Figure 3.2: Apparent adult alcohol consumption, Australia, 1976/1977 - 1998/1999



Beer
Over the 23 year period beer consumption decreased by 39% dropping from 6.56 litres absolute alcohol per capita (based on total beer volume) to 4.01 litres per capita.

Wine
The amount of alcohol consumed as wine increased over the period from 1.86 litres absolute alcohol per capita to 2.26 litres per capita. Wine consumption peaked in the 1983/1984 year when 2.57 litres absolute alcohol per capita (based on total wine volume) was recorded with consumption fluctuating between about 2.1 and 2.3 litres per capita up to the present.

Spirits
Overall, per capita consumption of alcohol consumed as spirits remained relatively stable fluctuating between about 1 and 1.3 litres per capita of absolute alcohol from 1976/1977 to 1992/1993. There appears to have been a small increase in consumption in spirits since 1993/1994 year reaching 1.39 litres absolute alcohol per capita in 1997/1998 (Figure 3.2).

1998 NDS Household Survey
A profile of current drinking patterns in Australia can be obtained from the 1998 National Drug Strategy Household Survey. (Current drinking is defined as the consumption of alcohol at least weekly or more often in the past 12 months.)

This survey found, in relation to current users of alcohol, that 12.6% of males and 13.9% of females aged 14 years and older had an alcohol consumption on an occasion in the past week which was at a hazardous[6] level (Table 3.4). A further 2.5% of males and 8.3% of females drank at a hazardous level less frequently than one day a week.

It was also found for current users of alcohol that 14.5% of males and 9.8% of females aged 14 years and older had an alcohol consumption on an occasion in the past week which was at a harmful[7] level. A further 3.4% of males and 5.7% of females drank at a hazardous level less frequently than one day a week.

The survey identified that males have high frequencies of regular alcohol use compared to females. More than twice as many male drinkers were more likely to consume alcohol every day than females (14.5% vs 6.4%). Nearly two thirds of males (63.9%) consumed three or more standard drinks on a day on which they consumed alcohol compared to nearly two in five females (37.7%).

In relation to *harmful* alcohol consumption (ie more than 6 standard drinks per day for males and more than 4 standard drinks per day for females), nearly one in five (17.9% of males) compared to nearly one in seven females (15.5%).

[6] Hazardous alcohol use for males is 4-6 standard drinks per day and for females is 2-4 standard drinks per day.
[7] Harmful alcohol use for males is more than 6 standard drinks per day and for females is more than 4 standard drinks per day.

Table 3.4: Proportion (%) of current drinkers by quantity of alcohol consumption and frequency of consumption, Australia, 1998

Frequency	Low risk		Hazardous	Harmful	Total
Males					
	1-2 std drinks/day	3-4 std drinks/day	5-6 std drinks/day	7+ std drinks/day	
Every day	4.5	5.3	2.8	1.9	14.5
4-6 days/week	4.6	5.8	3.2	2.8	16.4
2-3 days/week	6.4	7.3	3.6	5.7	22.9
1 day/week	3.4	6.0	3.1	4.1	16.6
Less often	17.3	6.5	2.5	3.4	29.7
Total males	36.1	30.9	15.1	17.9	100.0
Females					
	1-2 std drinks/day		3-4 std drinks/day	5+ std drinks/day	
Every day	3.6		1.8	1.0	6.4
4-6 days/week	6.0		3.3	0.7	10.1
2-3 days/week	8.6		4.4	3.3	16.3
1 day/week	8.6		4.3	4.9	17.8
Less often	35.4		8.3	5.7	49.4
Total females	62.3		22.2	15.5	100.0

3.3 Consumption - New Zealand

Over the 12 years from 1987 to 1998 per capita consumption of alcohol in New Zealand declined.. In 1987 the rate of consumption of all alcohol was 8.27 litres absolute alcohol per capita (based on person aged 15 years and older). By 1998 per capita consumption had decreased by 19% to 6.71 litres absolute alcohol per capita (Table 3.5).

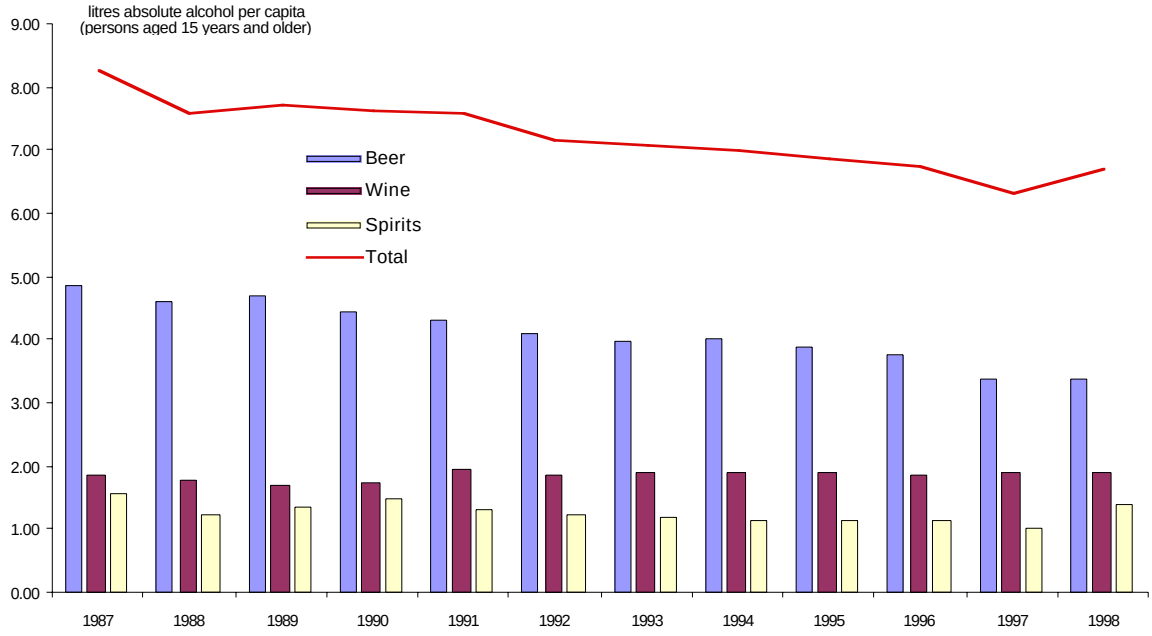
Overall, beer consumption has declined in New Zealand, dropping by 30% from 4.85 litres absolute alcohol in 1987 to 3.39 litres absolute alcohol per capita in 1998. Wine consumption has remained stable fluctuating between 1.7 and 1.9 litres absolute alcohol per capita over the 12 years from 1987 to 1998.

Consumption of spirits steadily declined by one third from 1.57 litres absolute alcohol in 1987 to 1.03 litres absolute alcohol in 1997. A more recent increase in consumption of spirits may have occurred with a rate of 4 litres absolute alcohol recorded in 1998 (Figure 3.3).

Table 3.5: Apparent adult alcohol consumption, New Zealand, 1987 - 1998

	Beer	Wine	Spirits	Total
1987	4.85	1.85	1.57	8.27
1988	4.60	1.76	1.22	7.60
1989	4.68	1.71	1.36	7.75
1990	4.44	1.74	1.47	7.65
1991	4.32	1.96	1.31	7.60
1992	4.09	1.84	1.24	7.17
1993	3.99	1.91	1.19	7.10
1994	4.00	1.89	1.14	7.03
1995	3.87	1.89	1.12	6.87
1996	3.76	1.84	1.15	6.75
1997	3.38	1.92	1.03	6.34
1998	3.39	1.92	1.40	6.71

Figure 3.3: Apparent adult alcohol consumption, New Zealand, 1987 - 1998



3.4 Consumption - United States

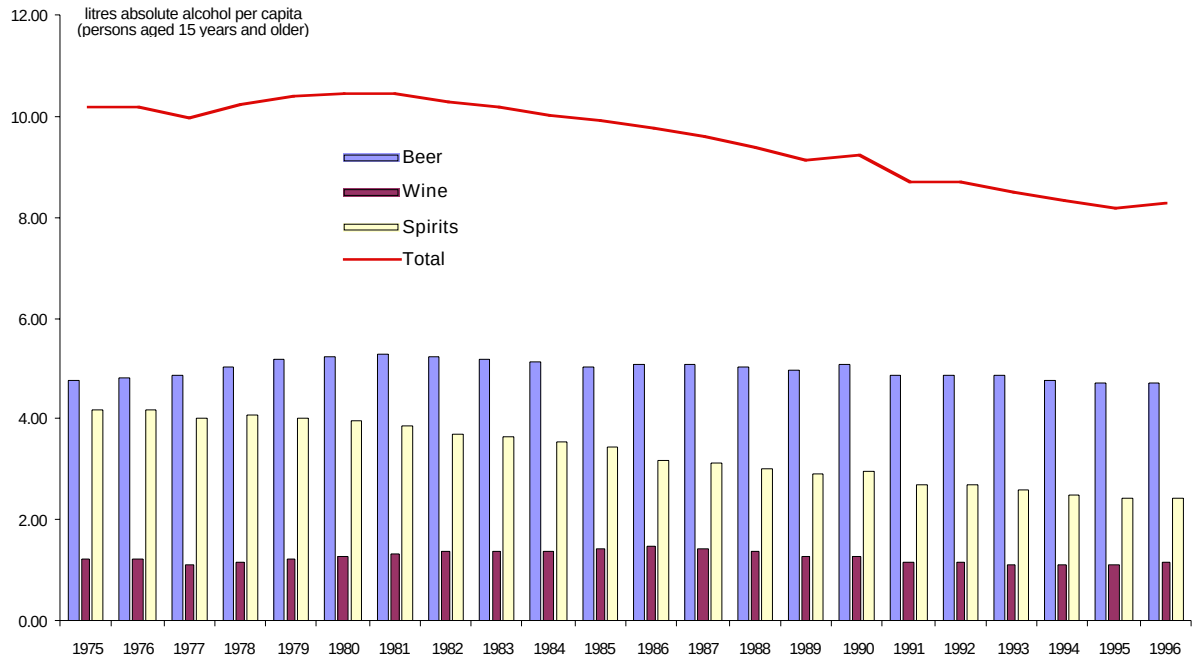
Over the period 1975 to 1996 total alcohol consumption has gradually declined in the United States (Table 3.6). The major contribution to the decrease in alcohol consumption has been the decline in the consumption of spirits dropping by 42%, from 4.20 litres absolute alcohol in 1975 to 2.42 litres absolute alcohol in 1996.

Consumption of wine and beer has remained more stable with small decreases recorded for both these types of alcohol since a peak in the early to mid 1980s (Figure 3.4).

Table 3.6: Apparent adult alcohol consumption, United States, 1975 - 1996

	Beer	Wine	Spirits	Total
1975	4.77	1.21	4.20	10.18
1976	4.81	1.21	4.16	10.18
1977	4.88	1.10	4.01	9.99
1978	5.03	1.17	4.05	10.26
1979	5.19	1.21	4.01	10.41
1980	5.22	1.29	3.94	10.45
1981	5.26	1.32	3.86	10.45
1982	5.22	1.36	3.71	10.30
1983	5.19	1.36	3.63	10.18
1984	5.11	1.40	3.56	10.03
1985	5.03	1.44	3.41	9.92
1986	5.07	1.48	3.18	9.77
1987	5.07	1.44	3.10	9.61
1988	5.03	1.36	2.99	9.39
1989	4.96	1.29	2.91	9.16
1990	5.07	1.25	2.95	9.27
1991	4.88	1.14	2.69	8.71
1992	4.88	1.14	2.69	8.74
1993	4.84	1.10	2.57	8.52
1994	4.77	1.10	2.50	8.36
1995	4.73	1.10	2.42	8.21
1996	4.73	1.14	2.42	8.29

Figure 3.4: Apparent adult alcohol consumption, United States, 1975 - 1996



4 Alcohol - young people

4.1 Prevalence - overview

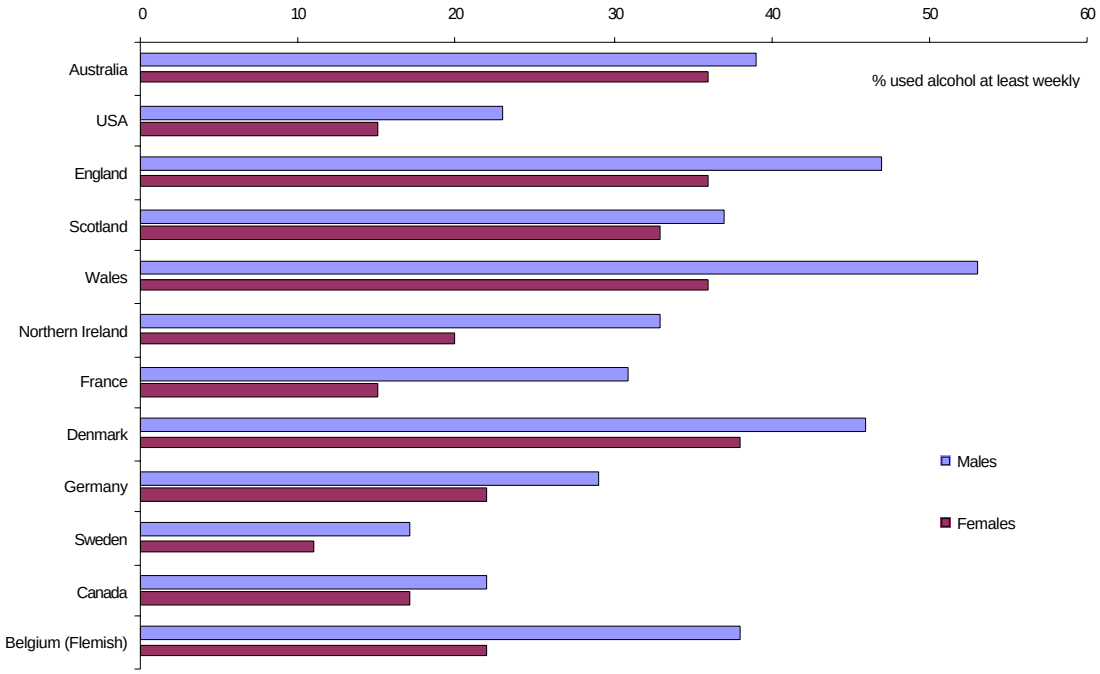
Because of variations in definitions, sampling and methodologies it is difficult to obtain comparable data for a larger range of jurisdictions. A pattern of high rates of at least weekly alcohol use by young people has been found in Australia and a number of European countries (Table 4.1).

There is also a consistent pattern of higher rates of regular alcohol by young males compared to young females (Figure 4.1).

Table 4.1 Proportion (%) of young people who drank alcohol at least weekly

	Year	Age group	Males	Females
Australia	1996	15	39.0	36.0
USA	1997/1998	15	23.0	15.0
England	1997/1998	15	47.0	36.0
Scotland	1997/1998	15	37.0	33.0
Wales	1997/1998	15	53.0	36.0
Northern Ireland	1997/1998	15	33.0	20.0
France	1997/1998	15	31.0	15.0
Denmark	1997/1998	15	46.0	38.0
Germany	1997/1998	15	29.0	22.0
Sweden	1997/1998	15	17.0	11.0
Canada	1997/1998	15	22.0	17.0
Belgium (Flemish)	1997/1998	15	38.0	22.0

Figure 4.1 Proportion (%) of young people who drank alcohol at least weekly



4.2 Prevalence - Australia

An analysis of trends in prevalence from the five national surveys of Australian secondary school students conducted between 1984 and 1996 by the Anti Cancer Council of Victoria has recently been published.[8]

12-15 year olds

Alcohol prevalence data for 12 to 15 year old male and female students who currently drink is presented in Figures 4.2 and 4.3. (A current drinker was defined in the surveys as someone who had consumed alcohol in the previous week.)

For both males and females the proportion of *current* drinkers in 1996 (29% vs 24%) was lower than recorded in 1984 and 1987, but was higher than recorded in 1990 and no different from the proportion of current drinkers for 1993.

In relation to current drinkers drinking at *hazardous* levels, for males this was highest in 1996, when 13% of 12 to 15 year old current drinkers were drinking at this level. For females hazardous drinking was highest in 1990, when 15% of 12 to 15 year old current drinkers were drinking at this level.

[8] White V, Hill D, Letcher T. "Alcohol use among Australian secondary students in 1996". *Drug and Alcohol Review* (accepted for publication).

Figure 4.2: Proportion (%) of males aged 12-15 years who are current and hazardous drinkers, Australia, 1984-1996

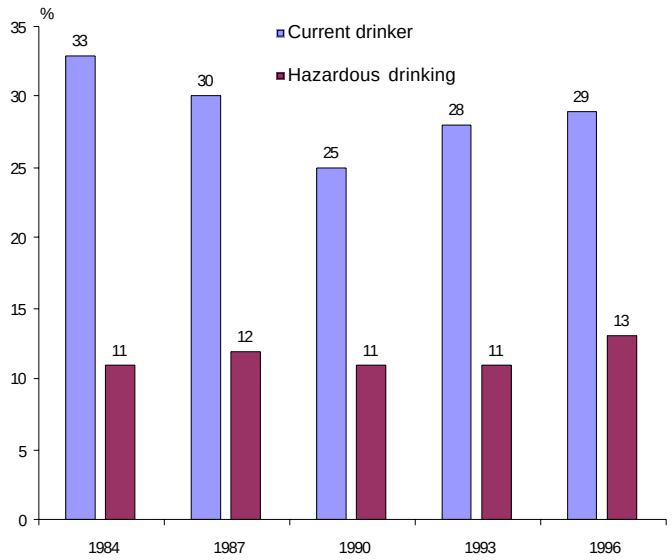
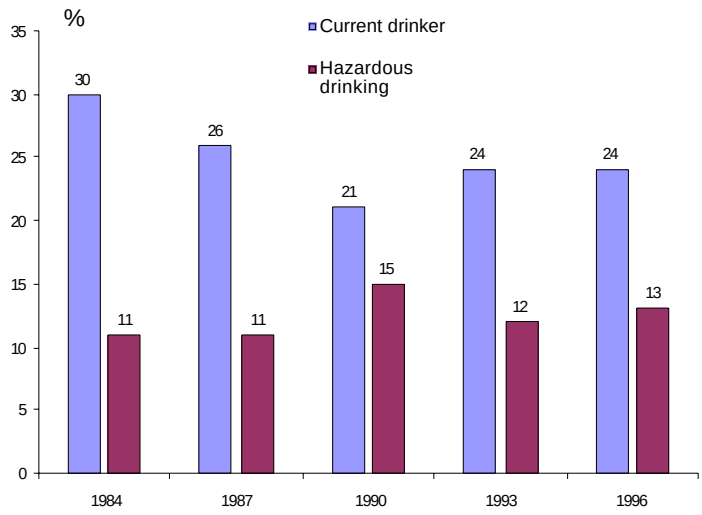


Figure 4.3: Proportion (%) of females aged 12-15 years who are current and hazardous drinkers, Australia, 1984-1996



16-17 year olds

Alcohol prevalence data for 16 to 17 year old male and female students who currently drink is presented in Figures 4.4 and 4.5.

For both males and females the proportion of *current* drinkers peaked in 1987 (55% vs 49%). There was a greater proportion of male current drinkers in 1996 (52%) than in 1993 (49%) and 1990 (47%) but higher proportions were recorded in 1984 (54%) and 1987 (55%). The greatest proportion of current female drinkers occurred in 1987 (49%), followed by a decline to 43% in 1993. More recently the proportion of current female drinkers increased to 46% in 1996.

Hazardous drinking by males increased from 29% of current drinkers in 1984 to 35% in 1996. The proportion of females drinking at *hazardous* levels was lowest in 1987 and 1990 (24%) than in 1984 (27%) and increased slightly in 1993 (30%) and 1996 (28%).

Figure 4.4: Proportion (%) of males aged 16-17 years who are current and hazardous drinkers, Australia, 1984-1996

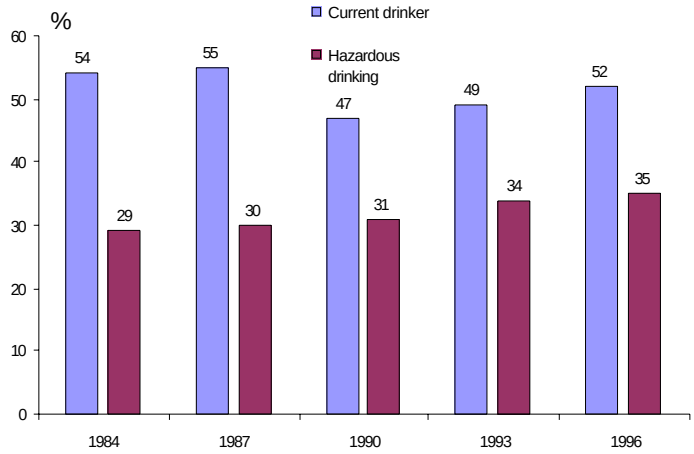
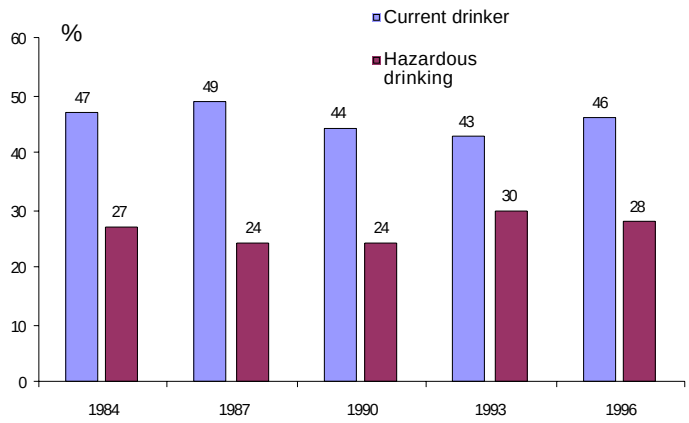


Figure 4.5: Proportion (%) of females aged 16-17 years who are current and hazardous drinkers, Australia, 1984-1996



4.3 Prevalence - United Kingdom

Alcohol prevalence data for 11 to 15 year old male and female students who currently drink is presented in Figure 4.6. (A current drinker was defined in the surveys as someone who had consumed alcohol in the previous week.)

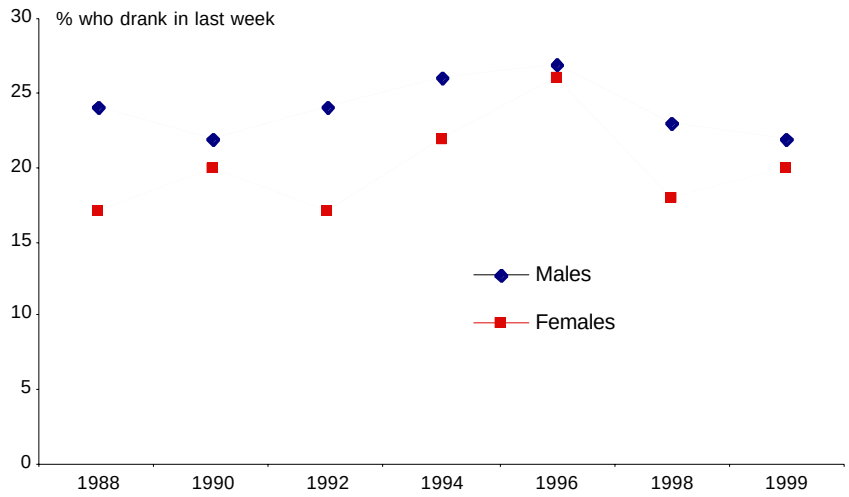
The proportion of male and female students who were current drinkers *increased* from 1988 to 1996 – males increased from 24% to 27% and females increased from 17% in 1988 to 26% in 1996.

Between 1996 and 1999 the proportion of students who drank in the last week *decreased* – males who currently drank dropped by nearly one fifth to 22% and females dropped by nearly a quarter to 20% (Table 4.2).

Table 4.2: Proportion (%) of 11-15 year olds who drank in last week United Kingdom, 1988 - 1999

	Males	Females
1988	24	17
1990	22	20
1992	24	17
1994	26	22
1996	27	26
1998	23	18
1999	22	20

Figure 4.6: Proportion (%) of 11-15 year olds who drank in last week United Kingdom, 1988 - 1999



5 Illicit drugs - adults

5.1 Prevalence - overview

A discussion of the comparative differences for lifetime and annual prevalence rates for amphetamines, cocaine, ecstasy and cannabis is contained in separate sections below. Data for all drugs is presented in Tables 5.1 and 5.2.[9]

Table 5.1: Lifetime prevalence (%) of amphetamines, cocaine, ecstasy and cannabis - adults

	Year	Age group	Amphetamines	Cocaine	Ecstasy	Cannabis
Australia	1998	14 yrs +	9.0	3.0	5.0	39.3
USA	1998	12 yrs +	4.4	10.6	-	33.0
UK (England & Wales)	1998	16 - 59	10.0	3.0	4.0	25.0
Ireland	1999	18 +	1.0	1.0	1.6	6.4
Belgium (Flemish C)	1994	18 - 65	0.9	0.5	0.5	5.8
Denmark	1994	18 - 69	4.0	2.0	-	31.3
Germany (Former East)	1997	18 - 59	0.5	0.2	0.7	4.2
Germany (Former West)	1997	18 - 59	1.8	1.5	1.7	13.4
Greece	1998	15 - 64	0.6	1.3	0.3	13.1
Spain	1997	15 - 64	2.5	3.3	2.5	22.2
France	1995	18 - 69	0.7	1.2	-	16.0
Netherlands	1997-1998	15 - 69	2.1	2.4	2.2	18.1
Finland	1998	15 - 69	1.0	6.0	0.5	9.7
Sweden	1998	15 - 69	2.0	1.0	-	13.0

Table 5.2: Annual prevalence (%) of amphetamines, cocaine, ecstasy and cannabis - adults

Country	Year	Age group	Amphetamines	Cocaine	Ecstasy	Cannabis
Australia	1998	14 yrs +	3.6	1.4	2.4	17.9
USA	1998	12 yrs +	0.8	1.7	-	8.6
UK (England & Wales)	1998	16 - 59	3.0	1.0	1.0	9.0
Belgium (Flemish C)	1994	18 - 65	0.3	0.2	0.1	1.5
Denmark	1994	18 - 69	-	-	-	3.3
Germany (Former East)	1997	18 - 59	0.3	0.1	0.4	2.3
Germany (Former West)	1997	18 - 59	0.5	0.7	0.9	4.5
Greece	1998	15 - 64	0.1	0.5	0.1	4.4
Spain	1997	15 - 64	0.9	1.6	0.9	7.6
France	1995	18 - 69	0.3	0.2	-	4.7
Netherlands	1997 - 1998	15 - 69	0.4	0.7	0.8	5.2
Finland	1998	15 - 69	0.2	0.2	0.2	2.5
Sweden	1998	15 - 69	-	-	-	1.0

[9] From published reports for the most recent national prevalence surveys. For Australia this was the 1998 National Drug Strategy Household Survey, for the United States this was from the 1998 National Household Survey on Drug Abuse. Data and for the European countries was published by the European Monitoring Centre for Drugs and Drug Addiction in the 2000 Annual Report.

5.2 Prevalence - cannabis

Australia had the highest *lifetime* adult prevalence (39%), followed by the United States (33%) and Denmark (31%). The United Kingdom (England and Wales) had a rate of 25%, followed by Spain (22%), the Netherlands (18%) and France (16%) (Table 5.1; Figure 5.1).

The highest *annual* adult prevalence for cannabis use occurred in Australia (18%). This was substantially higher than the rate of 9% for the United Kingdom (England and Wales) and the United States, followed by Spain (8%) (Table 5.2; Figure 5.2).

Figure 5.1: Lifetime prevalence (%) of cannabis use - adults

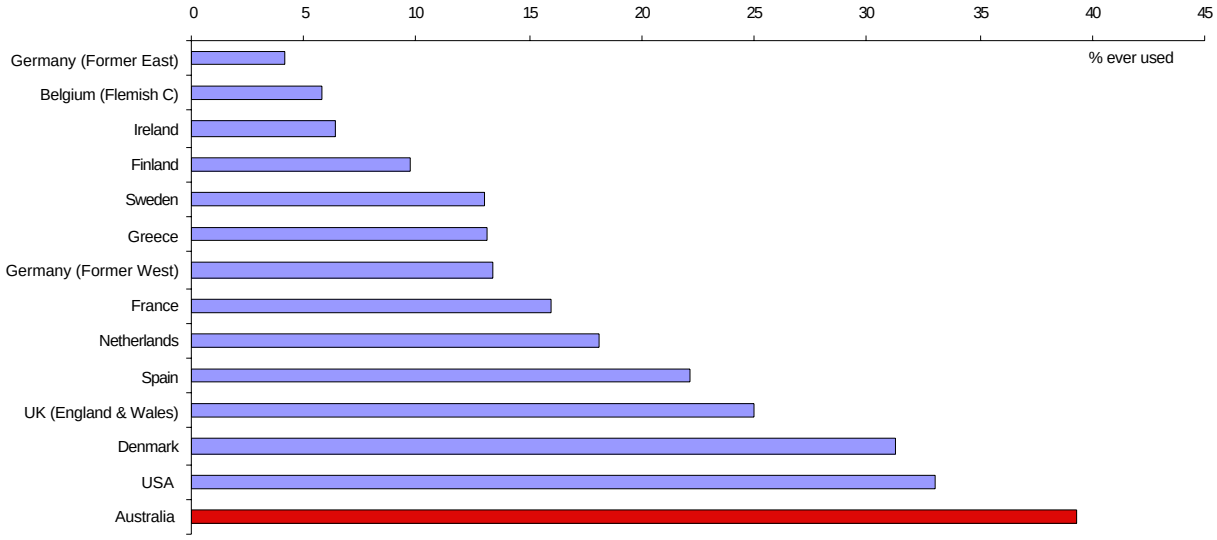
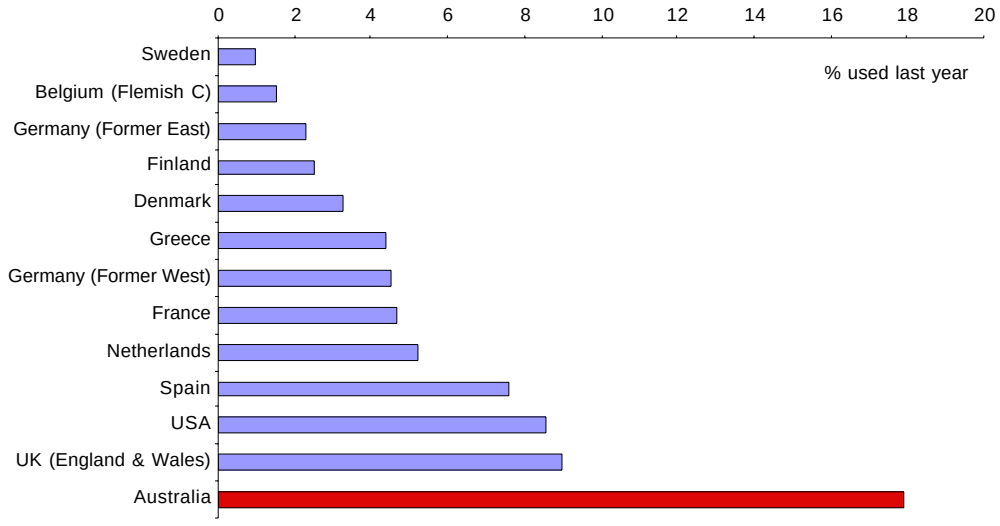


Figure 5.2: Annual prevalence (%) of cannabis use - adults



5.3 Prevalence - amphetamines

The UK had the highest *lifetime* adult prevalence rate (10%), closely followed by Australia with a rate of 9%. The next lowest rates of 4% were recorded for the USA and Denmark (Table 5.1; Figure 5.3).

Australia had the highest *annual* adult prevalence rate of 4%, followed by the United Kingdom (England and Wales) with a rate of 3% (Table 5.2; Figure 5.4).

Figure 5.3: Lifetime prevalence (%) of amphetamine use - adults

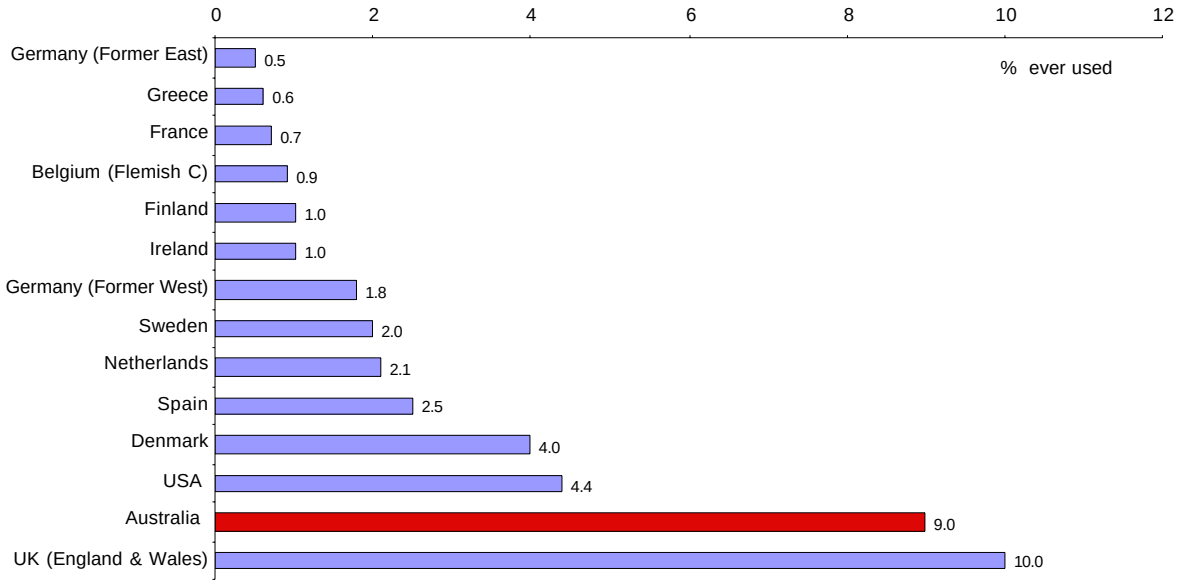
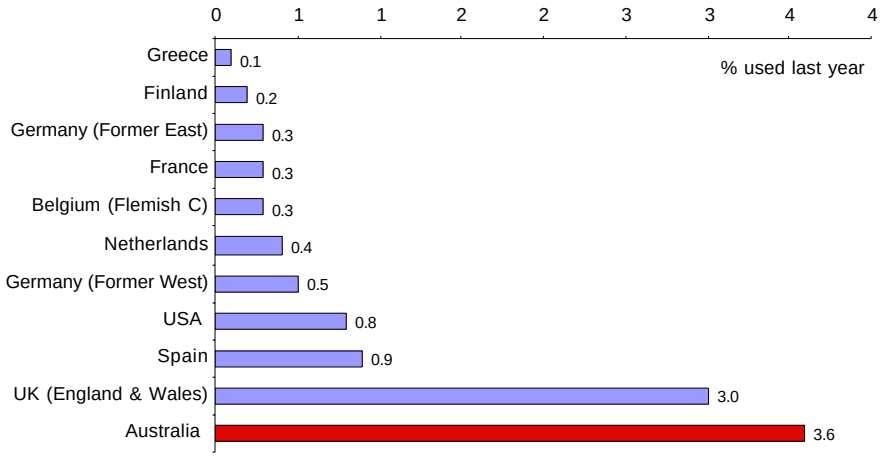


Figure 5.4: Annual prevalence (%) of amphetamine use - adults



5.4 Prevalence - cocaine

The USA had by far the highest *lifetime* adult prevalence rate (11%) followed by Finland (6%). Rates of 3% were recorded for Spain, Australia and the UK (England and Wales) (Table 5.1; Figure 5.5).

The USA and Spain both had the highest *annual* adult prevalence rate of 2%, followed by rate of 1% for both Australia and the UK (England and Wales (Table 5.2; Figure 5.6).

Figure 5.5: Lifetime prevalence (%) of cocaine use - adults

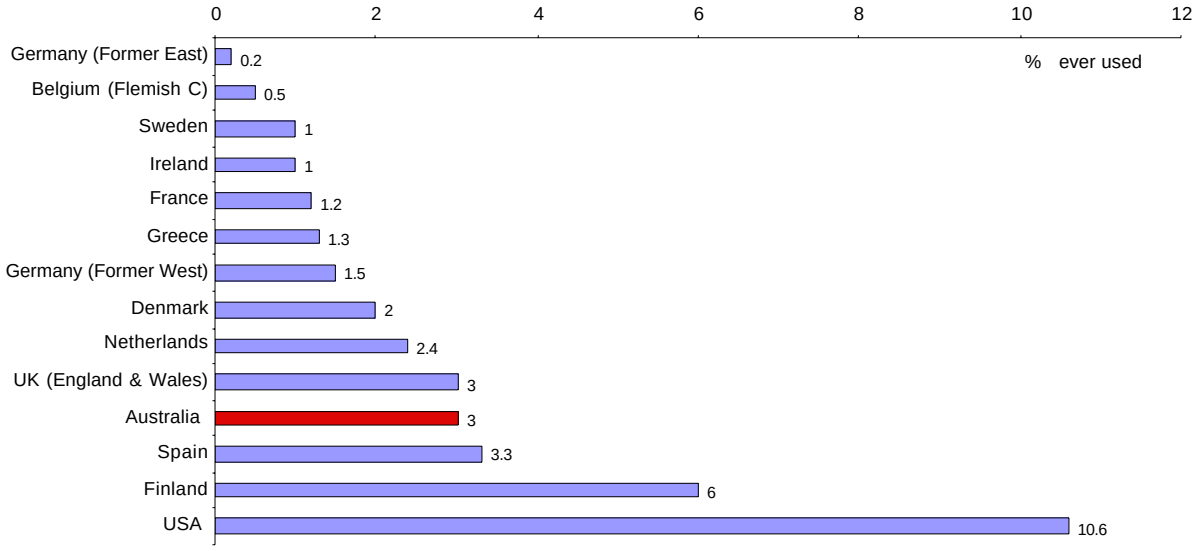
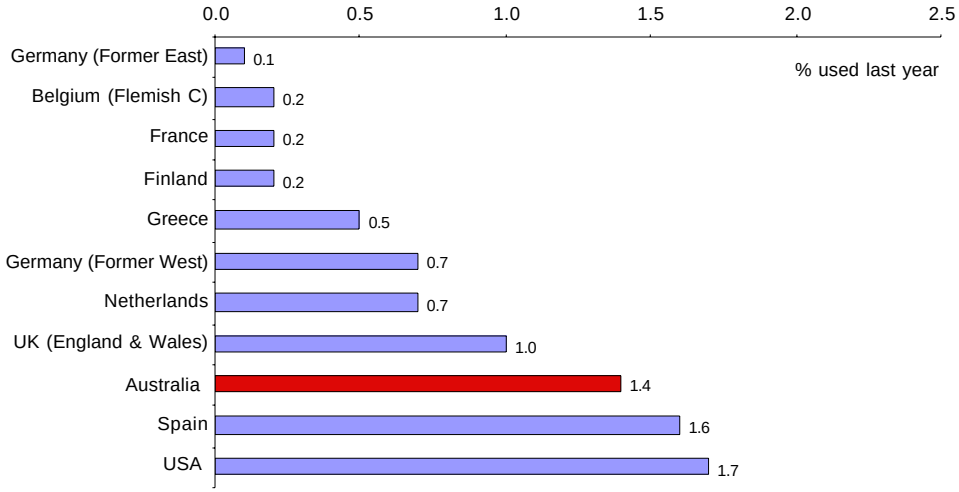


Figure 5.6: Annual prevalence (%) of cocaine use - adults



5.5 Prevalence - ecstasy

Australia had the highest *lifetime* adult prevalence rate (5%) This was closely followed by the UK with a rate of 4%, with rates of 2% for Germany (former West), Spain, Netherlands and Ireland (Table 5.1; Figure 5.7).

The highest *annual* adult prevalence rate of 2% occurred in Australia. Rates of 1% were recorded for the UK (England and Wales), Germany (Former West), Spain and the Netherlands (Table 5.2; Figure 5.8).

Figure 5.7: Lifetime prevalence (%) of ecstasy use - adults

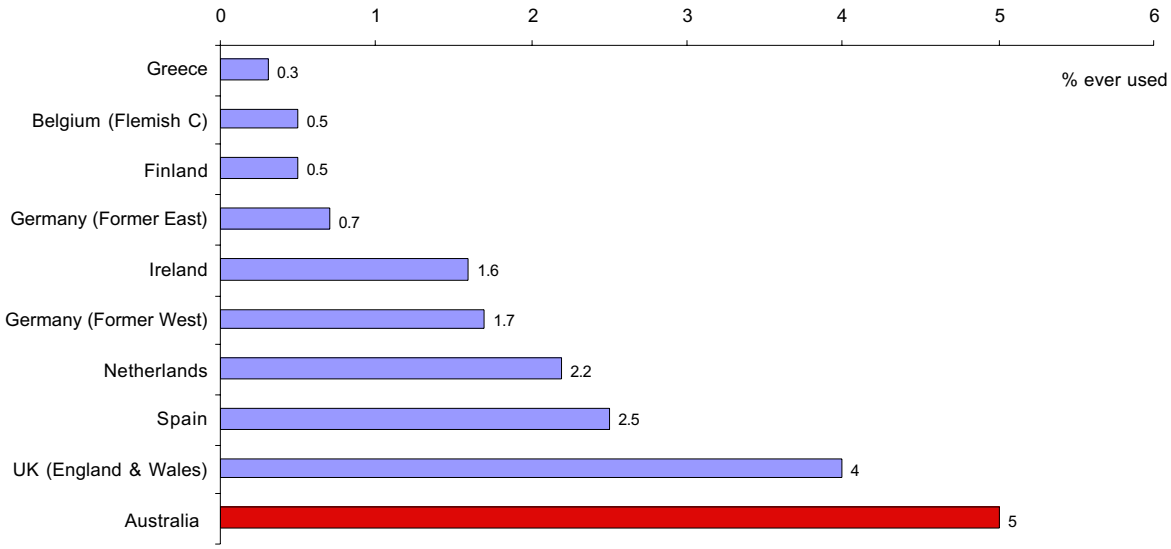
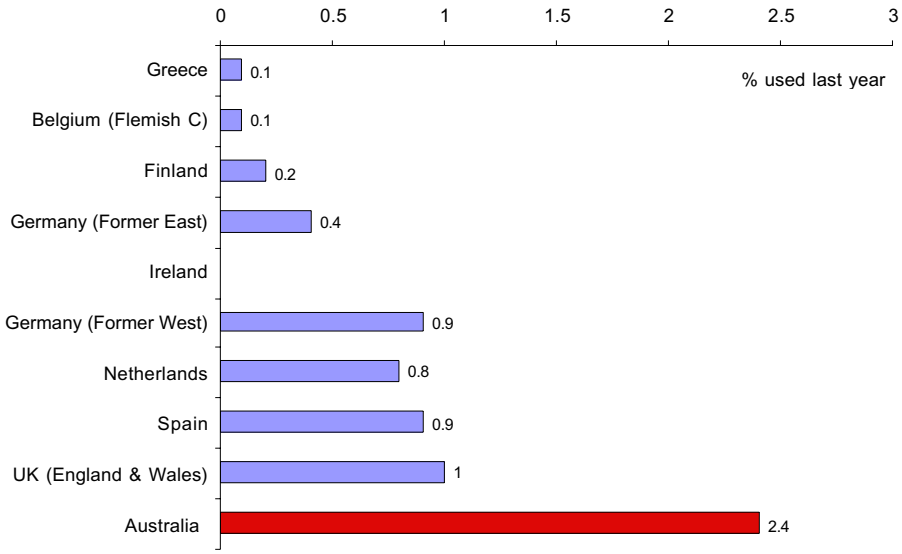


Figure 5.8: Annual prevalence (%) of ecstasy use - adults



5.6 Prevalence - Australia

Table 5.3 contains annual and lifetime prevalence data from the four most recent National Drug Household Surveys in 1991, 1993, 1995 and 1998. Prevalence rates for cannabis, LSD/hallucinogens, amphetamines, ecstasy/designer drugs, heroin and cocaine are contained in Table 5.3. This section provides an overview of trends in and patterns of illicit drug use in Australia in the past decade.

Increases occurred for all drugs from the 1995 to the 1998 surveys. Increases in the ever use and recent use of illicit drugs occurred for most drug groups as indicated in Table 5.3.

Similar rates of *ever use* of cannabis, LSD/hallucinogens, amphetamines were reported in the surveys conducted in 1991, 1993 and 1995. The rate of *recent use* of these drugs (ie in the last year) also increased slightly in the 1998 survey compared to the 1995 survey.

Table 5.3: Prevalence of illicit drug used by Australian adults, 1991-1998

Drug group and recency of use	1991	1993	1995	1998	Difference 1991-1998
Ever used					
Cannabis	32	34	31	39	+21.9%
LSD/hallucinogens	7	7	7	10	+42.9%
Amphetamines	8	8	6	9	+12.5%
Ecstasy/designer drugs	2	3	2	5	+250%
Heroin	2	2	1	2	-
Cocaine	3	2	3	4	+33.0%
Used in last year					
Cannabis	13	13	13	18	+38.5%
LSD/hallucinogens	2	1	2	3	+50.0%
Amphetamines	3	2	2	4	+33.0%
Ecstasy/designer drugs	1	1	1	2	+100.0%
Heroin	1	<1	<1	1	-
Cocaine	1	1	1	1	-

As much of the prevalence of illicit drug use for Australian adults can be explained by the high rates of cannabis use, trends in the use of this drug are presented in Table 5.4. This data shows that between 1985 and 1993 about four out of ten Australian adults (ie persons aged 14 years and older) had been offered cannabis.

It has been noted that there may have been an apparent drop in willingness to use, as in 1995 about one in five (21%) of Australians reporting being offered cannabis.

Lifetime use of cannabis increased over the period from 1985 to 1998. In 1985 and 1988 just over one in four (28% vs 27%) of adults had ever used cannabis. Between 1991 and 1995 about three out of ten Australians reported use of cannabis in their lifetime. There was an increase in lifetime use of cannabis in 1998, with nearly four out of ten (39%) Australian adults who had ever used.

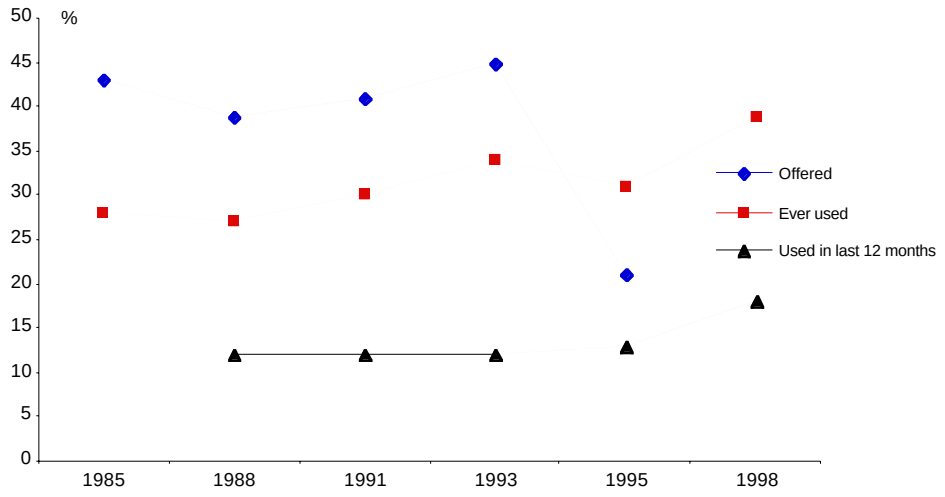
Overall, from 1985 to 1998 the proportion of Australian adults who had *ever* used cannabis increased by 36%, from 28% in 1985 to 39% in 1998. There was an overall increase of 50% in the recent use of cannabis (ie in the past year), from 12% in 1988 to 18% in 1998 (Figure 5.9).

Table 5.4: Prevalence (%) of cannabis use by adults, Australia, 1985 - 1998

Recency of use	1985	1988	1991	1993	1995	1998
Offered	43	39	41	45	21	na
Ever used	28	27	30	34	31	39
Used in last 12 months	na	12	12	12	13	18

Note:na = not available

Figure 5.9: Prevalence (%) of cannabis use by adults, Australia, 1985 - 1998



6 Illicit drugs - young people

6.1 Prevalence - overview

Comparative national data is only available for drug use by students for *lifetime* prevalence. This is presented in Table 6.1. The following discussion deals with cannabis, amphetamines, cocaine and ecstasy, the most widely used illicit drugs.

Table 6.1: Lifetime prevalence (%) of amphetamines, cocaine, ecstasy and cannabis - students

	Year	Age group	Amphetamines	Cocaine	Ecstasy	Cannabis	Solvents	Heroin	LSD
Australia	1996	16	8.0	3.0	5.0	50.0	18.0	4.0	13.0
USA	1999	17	16.3	9.8	8.0	49.7	15.4	2.0	
UK	1997	15 - 16	7.3	1.5	3.0	37.5	4.0	0.7	3.2
Belgium (Flemish C)	1998	15 - 16	3.8	1.3	6.2	23.7	4.4	0.7	2.1
Denmark	1999	15 - 16	4.0	1.1	3.1	24.4	7.5	1.4	1.0
Greece	1998	15 - 16	3.6	1.6	1.9	10.2	13.7	0.8	2.6
Spain	1998	15 - 16	4.0	4.3	2.9	28.0	4.2	1.0	4.8
France	1997	15 - 16	1.9	1.5	2.5	23.0	5.5	1.4	-
Italy	1999	15 - 16	2.0	4.0	4.0	19.0	4.0	4.0	1.0
Netherlands	1996	15 - 16	7.8	4.3	8.1	31.1	-	1.3	-
Sweden	1998	15 - 16	1.1	0.6	1.0	7.2	8.2	0.6	1.0

6.2 Prevalence - United States

In the United States the National Drug Institute has been responsible for undertaking prevalence studies over an extended period of time which is published annually in a report called ***Monitoring the future***.

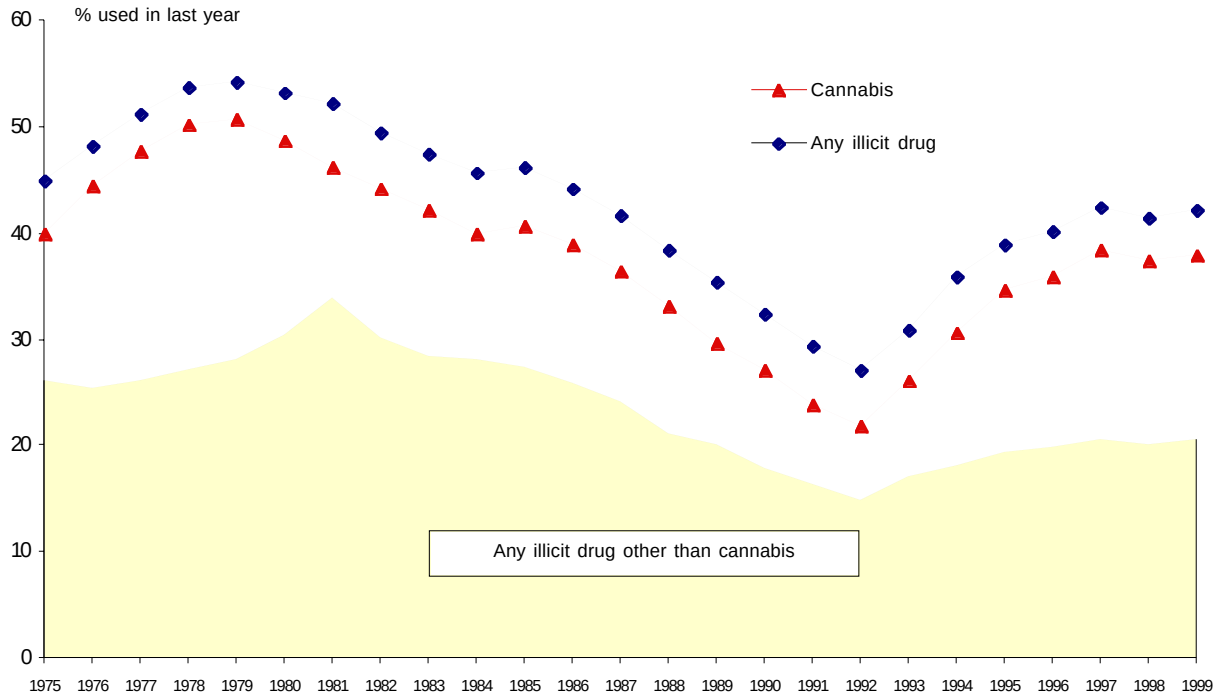
At the core of ***Monitoring the future*** is a series of large, annual surveys of nationally representative samples of students in public and private secondary schools throughout the United States. Every year since 1975 a national sample of 12 graders has been surveyed. Commencing in 1991 the study was expanded to include comparable national samples of 8th and 10th graders for each year. This series of studies is conducted by the University of Michigan's Institute for Social Research.

Data from these surveys has been extracted from 1975 to 1999 for annual prevalence of the use of *any illicit drug*, the use of cannabis and the use of any illicit drug other than cannabis and is presented in Figure 6.1. Illicit drug use by young people peaked in the late 1970s in the United States when 54% of 17 year old students reported use of any illicit drug in the past year. Prevalence of any illicit drug use steadily declined by nearly half to 27% in 1992 and has since gradually increased to around 40% since 1996.

As most all illicit drug use by young people involves *cannabis* the trend since 1975 for cannabis use closely follows this pattern of a peak of 51% of use of cannabis in the last year in 1979 followed by a decline to 22% in 1992. After increasing to 36% in 1996 annual use of cannabis appears to have stabilised at around 38% of 17 year olds in the United States.

There has been a similar cyclical of *any illicit drug other than cannabis* between 1975 and 1999, reaching 34% in 1981, steadily decreasing to 15% in 1992 and gradually increasing to 20% of 12 graders using in the past year.

Figure 6.1: Annual prevalence (%) of illicit drug use by 17 year olds United States, 1975 - 1999



6.3 Prevalence - United Kingdom

National surveys of secondary school students aged 11 to 15 years have been carried out in England since 1982. The first survey in 1982 surveyed smoking behaviour and in 1988 additional questions were included about alcohol consumption of school students. Questions about use of other drugs were included for the first time in the 1998 survey.

Between 1982 and 1999 surveys were conducted by the Office of National Statistics, with the 2000 survey undertaken by the National Centre for Social Research. The surveys in 1998, 1999 and 2000 consistently identified that cannabis was the drug most likely to have been used iin the past year by school students aged 11 to 15 years.

Overall, 12% of all 11 to 15 year old students had used cannabis in 2000 with a higher rate amongst males (13%) compared to females (11%). Low rates of use were generally found for other groups of drugs contained in the survey, with 4% having used psychostimulants (which in the survey included cocaine, crack, ecstasy, amphetamines and poppers) and 3% having used volatile substances (glue/gas).

Lower rates were found in relation to LSD/hallucinogens with 2% of students having used either LSD or magic mushrooms and 1% of students having used opiates (heroin or methadone) (Table 6.2).

Table 6.2: Use of drugs in past year (%), school students 11-15 years England, 1998-2000

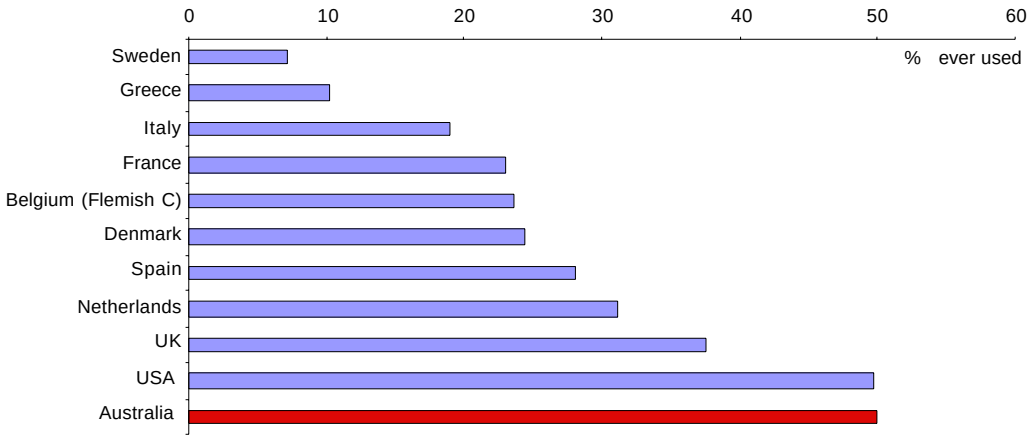
	Males			Females			All students		
	1998	1999	2000	1998	1999	2000	1998	1999	2000
Cannabis	11	11	13	9	10	11	10	11	12
Psychostimulants	3	3	4	3	3	4	3	3	4
LSD/hallucinogens	2	1	2	1	1	1	1	1	2
Opiates	-	-	1	-	-	1	-	-	1
Solvents	1	2	3	1	3	3	1	3	3
Tranquillisers	-	-	-	-	-	-	-	-	-
Steroids	1	-	-	-	-	-	-	-	-
Other drugs	1	1	1	1	-	1	1	-	1
Any drug used in last year	12	13	15	10	12	13	11	12	14

Source:National Centre for Social Research (2001).

6.4 Prevalence - cannabis

Most drug use by young people involves cannabis, as has also been noted for adults. The highest *lifetime prevalence* rate of 50% was reported in both the United States and Australia. A somewhat lower rate of 38% was recorded for the UK followed by the Netherlands and Spain with rates of 31% and 28% respectively (Figure 6.2).

Figure 6.2: Lifetime prevalence (%) of cannabis use - young people



6.5 Prevalence - Australia

Much of the prevalence of illicit drug use by young Australians can be explained by the relatively high rates of cannabis use. An overview of trends in cannabis shows that between 1985 and 1995 about just over half of young Australians aged between 14 and 19 had been offered cannabis (Table 6.3). As data is not available for 1998 it is not possible to determine whether the downward trend that occurred between 1993 and 1995 persisted in 1998.

Lifetime use of cannabis by 14 to 19 year olds increased by 41% over the period, from 32% in 1985 to 45% in 1998. After increasing to 40% in 1993, there was a drop to 36% in 1995. However more recently there has been an increase since 1995 such that by 1998 more than four out of ten young people had ever used cannabis (Figure 6.3).

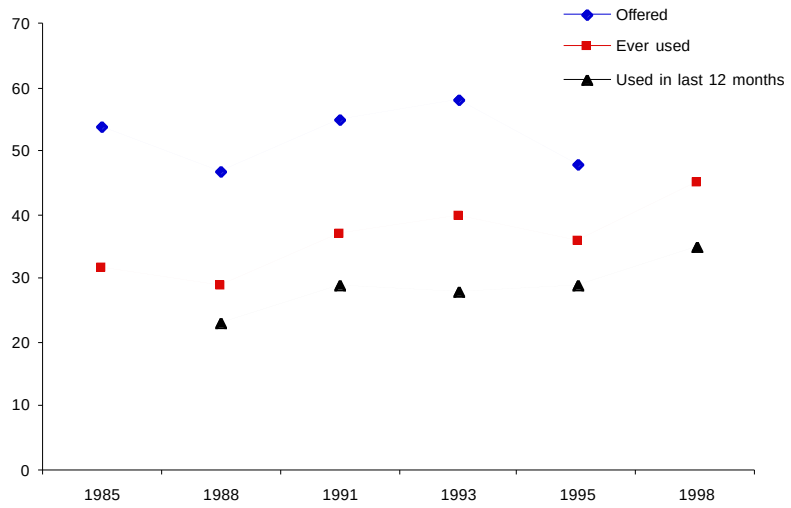
Annual prevalence is probably the most useful indicator of recency of cannabis use which indicates usage increased by just over one third, from 23% in 1988 to 35% in 1998.

Table 6.3: Prevalence (%) of cannabis use by 14-19 year olds, Australia, 1985 - 1998

Recency of use	1985	1988	1991	1993	1995	1998
Offered	54	47	55	58	48	na
Ever used	32	29	37	40	36	45
Used in last 12 months	na	23	29	28	29	35

Note:na = not available

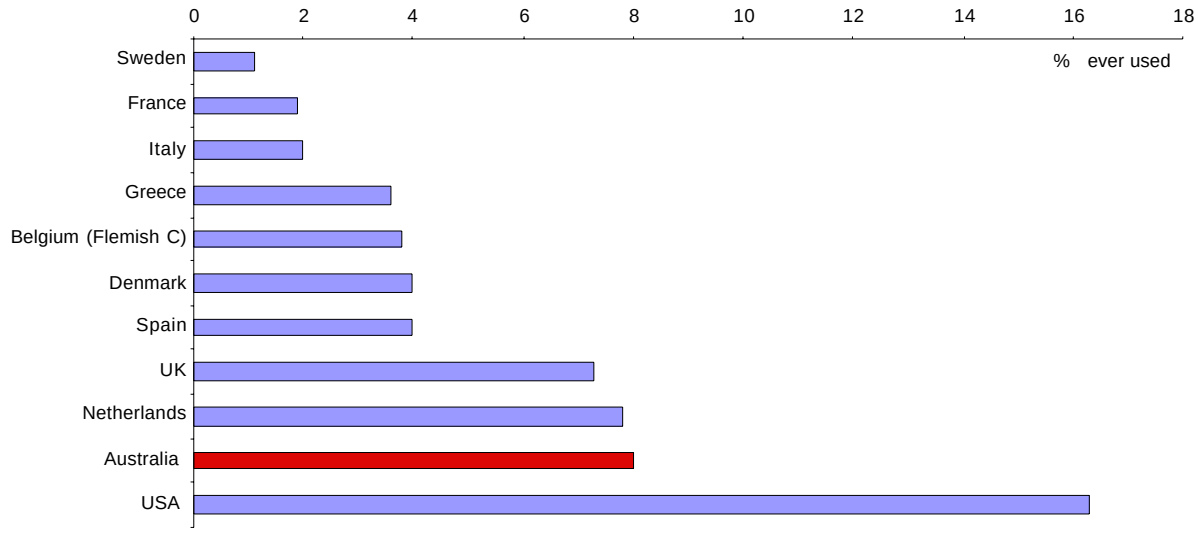
Figure 6.3: Prevalence (%) of cannabis use by 14-19 year olds, Australia, 1985 - 1998



6.6 Prevalence - amphetamines

The highest levels of *lifetime* use of amphetamines occurred in the USA, with 16% reporting ever use, with 8% for Australia and the Netherlands followed by 7% for the UK (Figure 6.4).

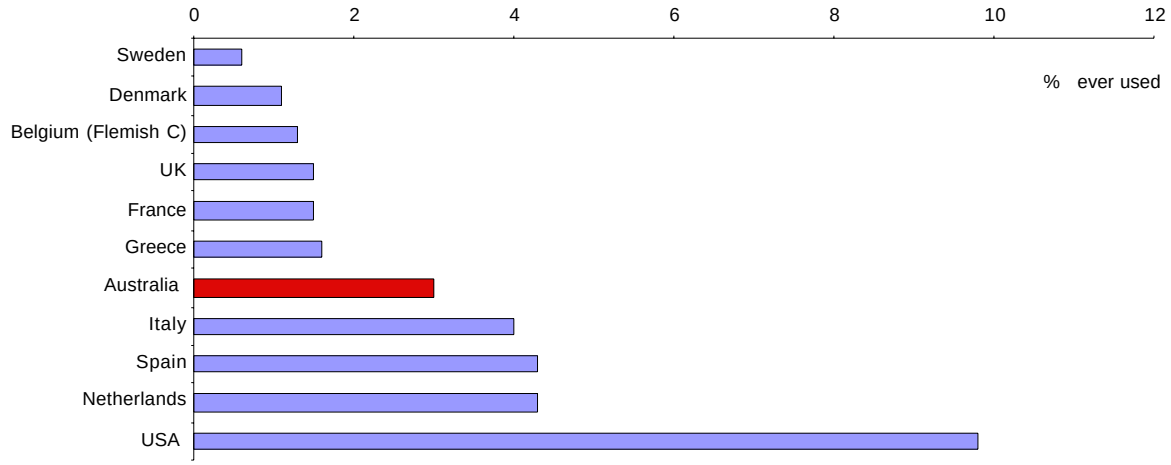
Figure 6.4: Lifetime prevalence (%) of amphetamine use - young people



6.7 Prevalence - cocaine

There was a much higher level of *lifetime* use of cocaine in the USA (10%), compared to any other country. Lower rates of 4% were reported in the Netherlands and Spain, followed by a rate of 3% in Australia (Figure 6.5). (A similar pattern of much higher levels of cocaine compared to other countries also occurs for American adults.)

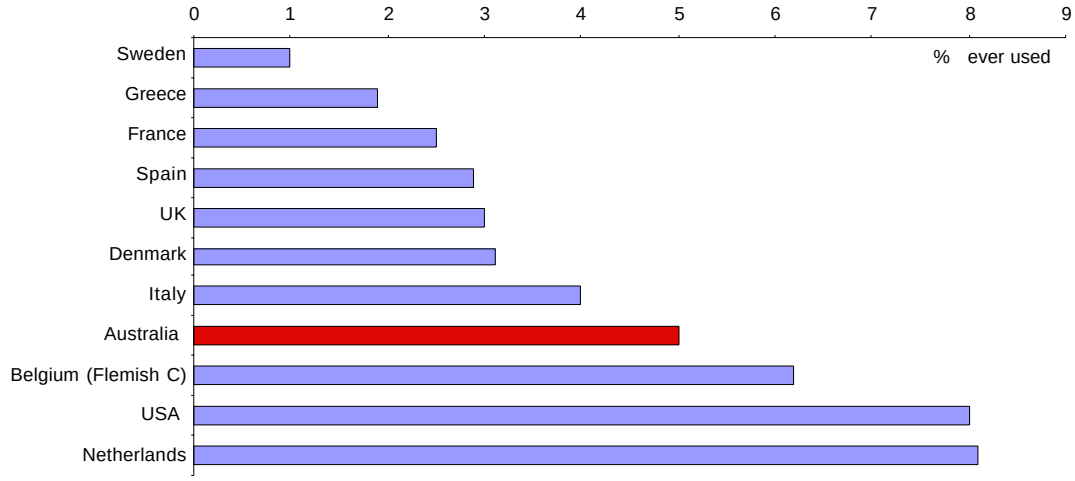
Figure 6.5: Lifetime prevalence (%) of cocaine use - young people



6.8 Prevalence - ecstasy

The highest levels of *lifetime* use of ecstasy occurred in the USA and the Netherlands (8%), followed by Belgium (6%) and Australia (5%) (Figure 6.6).

Figure 6.6: Lifetime prevalence (%) of ecstasy use - young people



7 Infectious diseases

There are harms associated with illicit drug use in relation to injection of drugs. These include the risk of overdose and being exposed to blood borne viruses (BBVs) such as HIV, hepatitis B and hepatitis C. It should be noted that the following data represents diverse IDU populations and divergent methodologies have been used to collect the data.

7.1 HIV

Variations between different jurisdictions in the rate of infection with HIV diagnosed among IDUs is shown in Table 7.1. The highest rate occurs in Spain, with 32% of IDUs tested from samples from a number of treatment programs. This is followed by somewhat lower rates for France (16.4%), Italy (16.2%), followed by the Netherlands with 13.0%.

In Australia sentinel surveillance of needle and syringe programs (NSPs) indicates very low rates of HIV. In 1999 only 1.4% of IDUs tested from the 34 participating NSPs had HIV antibodies[10] (Figure 7.1).

Australia had the third lowest rate of 1.4% (after England, Wales and Scotland) for the 13 countries for which data is available.

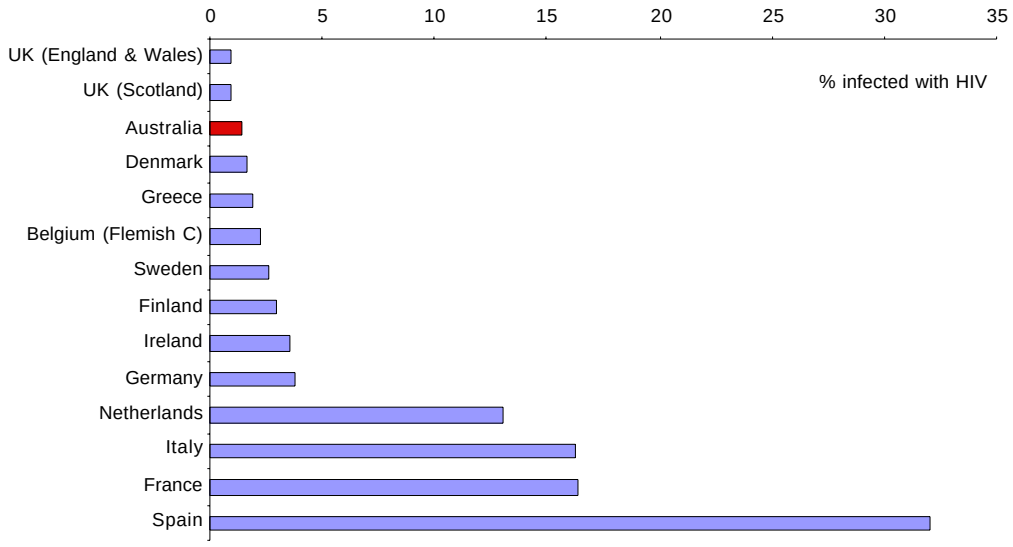
Table 7.1: Prevalence (%) of HIV infection among injecting drug users

	Year	Data source	No. tested	Percentage infected
Australia	1999	Syringe exchange	2,378	1.4
USA				
UK (England & Wales)	1998	Treatment, unlinked anonymous	3,366	1.0
UK (Scotland)	1998	Screening	3,019	1.0
Belgium (Flemish C)	1996-1997	Treatment, street studies	225	2.2
Denmark	1996 - 1997	Treatment, prison	608	1.7
Germany	1998	Treatment	1,598	3.8
Greece	1997-1998	Treatment, screening	1,119	1.9
Spain	1996	Treatment	2,025	32.0
France	1997	Treatment, notifications	8,511	16.4
Ireland	1998	Survey, prison	509	3.5
Italy	1998	Treatment, screening	71,759	16.2
Netherlands	1996-1998	Treatment, street studies	1,292	13.0
Finland	1997	Syringe exchange	135	3.0
Sweden	1997	Prison	196	2.6

Note: Midpoint used if range of estimates provided.

[10] National Centre in HIV Epidemiology and Clinical Research. *HIV/AIDS, hepatitis C and sexually transmissible infections in Australia Annual Surveillance Report 2000*. Sydney, National Centre in HIV Epidemiology and Clinical Research, the University of New South Wales.

Figure 7.1: Prevalence (%) of HIV infection among injecting drug users



7.2 Hepatitis C

High levels of infection of hepatitis C have been reported in most jurisdictions, ranging from 35% in the UK to 92% in Sweden (Table 8.2; Figure 7.2). Australia had the second lowest rate of 50% (after England, Wales and Scotland) for the 13 countries for which data is available.

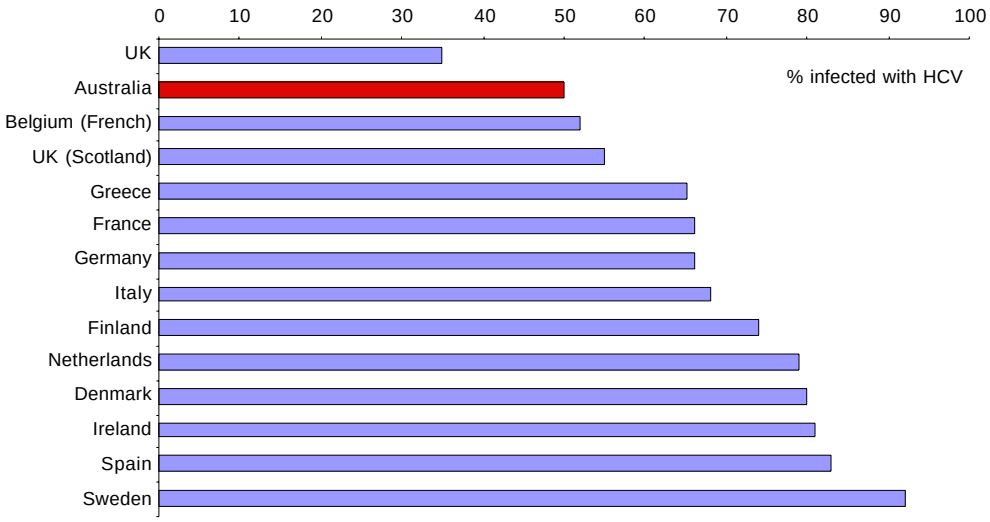
It should be noted that some of these variations may reflect differences in sampling and testing rather than differences in prevalence of HCV in IDUs in different countries.

Table 7.2: Prevalence (%) of hepatitis C among injecting drug users

	Year	Data source	No. tested	Percentage infected
Australia	1999	Syringe exchange		50.0
USA				-
UK	1998	Treatment	3,366	35.0
UK (Scotland)	1997	Screening	1,393	55.0
Belgium (French)	1998	Treatment	237	52.0
Denmark	1996 - 1997	Treatment, prison	602	80.0
Germany	1995	Treatment	120	66.0
Greece	1996-1998	Treatment	1,400	65.0
Spain	1996	Treatment	1,000	83.0
France	1997	Treatment, notifications	8,048	66.0
Ireland	1998	Prison	509	81.0
Italy	1998	Treatment	72,336	68.0
Netherlands	1994-1996	Treatment, street studies	503	79.0
Finland	1997	Syringe exchange	135	74.0
Sweden	1994	Prison, treatment	905	92.0

Note: Midpoint used if range of estimates provided.

Figure 7.2: Prevalence (%) of hepatitis C infection among injecting drug users



8 Mortality

8.1 Overview

It is difficult to compare jurisdictions with one another because different methodologies are used to identify and code drug related deaths, trends might be inferred within particular jurisdictions. Also this analysis should be treated with caution as it does not take account of increases in population nor able to determine changes in the size of the at risk population.

The recent upward trend in heroin related deaths (HRDs) in Australia has been documented in research undertaken by Professor Wayne Hall and his colleagues at the National Drug and Alcohol Research Centre.[11] It should be noted that the NDARC approach uses a restrictive set of ICD9 codes and also identifies a smaller set of cases as it only analyses persons between the ages of 15 to 44 years. This research shows that the *number* of HRDs in Australia increased by 89.9% over a seven year period from 316 in 1990 to 600 in 1997.

A more comprehensive estimate of the number of drug related deaths in Australia is obtained by the use of the methodology of aetiologic fractions. Research shows that the number of all types of drug related deaths has increased by 54.9% over the five year period from 519 in 1991 to 804 in 1996.

The EMCDDA has developed a set of ICD9 codes that provide a restricted count of the number of drug related deaths referred to 'acute' deaths.[12] The UK Office of National Statistics (ONS) uses a somewhat broader set of ICD9 codes to estimate the number of drug related deaths.

Comparisons between a number of the major European countries show the following changes in the number of drug related deaths (Table 8.1):

- United Kingdom – increased by 60% (from 1,339 in 1990 to 2,144 in 1997);
- Italy – increased by 34% (from 1,161 in 1990 to 1,566 in 1996)[13];
- Sweden – increased by 75% (from 143 in 1990 to 250 in 1996);
- Netherlands – increased by 63% (from 43 in 1990 to 70 in 1997);
- Denmark – increased by 139% (from 115 in 1990 to 275 in 1997); and
- Greece – increased by 251% (from 66 in 1990 to 232 in 1997).

[11] Lynskey M, Hall W. *Jurisdictional trends in opioid overdose deaths, 1988-1996*. Sydney, National Drug and Alcohol Research Centre, University of New South Wales, 1998.
[12] Which elsewhere are usually referred to as accidental overdoses.
[13] There was a drop of 406 (25.9%) deaths from 1,566 in 1996 to 1,160 in 1997.

Table 8.1: Number of drug related deaths, 1985 – 1998

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Australia (HRDs ages 15-44 yrs)	-	-	-	347	302	316	243	327	357	406	550	526	600	737
Australia (all drug causes)	-	-	-	-	-	-	519	582	572	670	839	804	-	-
Belgium	12	20	17	37	49	96	90	75	80	46	48	na	na	na
Denmark	150	109	140	135	123	115	188	208	210	271	274	266	275	250
France	172	185	228	236	318	350	411	499	454	564	465	393	228	143
Germany	324	348	442	670	991	1,491	2,125	2,099	1,738	1,624	1,565	1,712	1,501	1,674
Greece	10	28	56	62	72	66	79	79	78	146	176	222	232	244
Ireland	19	6	4	7	5	7	7	14	16	19	39	50	52	90
Italy	242	292	543	809	974	1,161	1,383	1,217	888	867	1,195	1,566	1,160	1,076
Netherlands	40	42	23	33	30	43	49	43	38	50	33	63	70	61
Spain	143	163	234	337	455	455	579	556	442	388	394	429	360	310
Sweden	150	138	141	125	113	143	147	175	181	205	194	250	na	na
United Kingdom (England & Wales)	1,254	1,362	1,332	1,348	1,321	1,339	1,411	1,533	1,615	1,796	1,956	2,150	2,144	na

8.2 Methodological issues

Drug related mortality is studied by the use of a set of ICD9 codes to determine the number of deaths. Australian researchers have developed a comprehensive set of ICD9 codes that use the methodology of aetiologic fractions to estimate all deaths both wholly and partially attributable to drug related causes. This set of codes was used in the seminal study by Collins and Lapsley.[14]

This set of codes was also used by the Health Information Centre in its recent study of the number of deaths due to alcohol, tobacco and other drugs in Western Australia and Australia.[15]

The enumeration of the number of drug related deaths is a useful indicator of underlying patterns of drug abuse. It has been noted that

"(p)roblem drug users have a much higher risk of death than the general population, from a wide range of causes and not just acute toxication. Studies indicate that opiate injectors have a 20-30 times higher risk of death by overdose, HIV infection, accident and suicide than non drug users of the same age."[16]

The EMCDDA has examined a number of methodologies to compare the rate of deaths due to drug abuse between different European countries. The shortcomings of these methodologies were discussed in its 2000 annual report It was concluded that

"Dutch and UK national definitions…give fairly similar results to definition A, whereas Sweden's definition provides data in between those for definitions B and C. In Sweden, cases are also selected using both underlying and contributory causes of death, and not only underlying causes as in the EMCDDA project. This results in a higher 'national' estimate, since not only acute deaths (overdoses), but also indirect drug related deaths may be included."[17]

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[14] Collins DJ, Lapsley HM. *Estimating the economic costs of drug abuse in Australia*. Canberra, Australian Government Publishing Service, 1991.

[15] Unwin E, Codde. *Comparison of deaths due to alcohol, tobacco and other drugs in Western Australia and Australia.* Perth, Health Information Centre, Health Department of WA, 1998.

[16] European Monitoring Centre for Drugs and Drug Addiction. *Annual report on the state of the drugs problem in the European Union 1999*. Luxembourg, Office for Official Publications of the European Communities. European Monitoring Centre for Drugs and Drug Addiction, 1999, 20.

[17] European Monitoring Centre for Drugs and Drug Addiction
Annual report on the state of the drugs problem in the European Union 2000. Luxembourg, Office for Official Publications of the European Communities. European Monitoring Centre for Drugs and Drug Addiction, 2000, 17.

The variations in the sets of ICD9 codes that have been used by different methodologies are contained in Table 8.2.

Table 8.2: List of ICD9 codes used to count deaths caused by drugs other than alcohol or tobacco

Description	EMCDDA (Europe)	ONS (UK)	HDWA (Australia)	NDARC (Australia)
Wholly attributable causes				
Drug psychosis	292	292	292	-
Drug dependence	304	304	304	304.0, 304.7
Non dependent abuse of drugs	305.2-305.9	305.2-305.9	305	-
Accidental poisoning – drugs	-	E850 – E858	E850 – E858	-
Accidental poisoning – opiates and related narcotics	E850.0	-	-	E850.0, E850.1
Accidental poisoning – antidepressants	-	-	-	-
Accidental poisoning – hallucinogens	E854.1	-	-	-
Accidental poisoning – psychostimulants	E854.2	-	-	-
Accidental poisoning volatile substances	-	-	E862.0, E862.1, E862.4, E862.9, E866.6	-
Suicide - drugs	-	E950.0 – E950.5	E950.0 – E950.5	-
Suicide – volatile substances	-	-	E951.1	-
Assault by poisoning	-	E962.0	E962.0	-
Undetermined – drugs	-	-	E980.0 – E980.5	-
Undetermined – volatile substances	-	-	E981.1	-
Partially attributable causes				
Conditions associated with childbirth and newborn drug toxicity	-	-	640, 641, 656.5, 760.72-760.73, 764, 765, 779.5	
Hepatitis B, Hepatitis C	-	-	070.2-070.5	
AIDS/HIV	-	-	279.1, 042-044	
Infective endocarditis	-	-	421	
Maternal drug dependence	-	-	648.3	

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